Access DB# 92226

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Ahmed M. Farah Examiner #: 77541 Date: 04/23/03
Art Unit: 3739 Phone Number 305-5787 Serial Number: 09/924,156
Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method of treating acne

Inventors (please provide full names): Rafeal A. Sierra; Mirko Mirkov; Kathleen I. McMillan; and Jennifer K. Lloyd.

Earliest Priority Filing Date: 08/07/01

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

(1) Method for selectively photothermal sebaceous gland disruption and treatment of acne, the method comprising:
- introducing exogenous chromophores to sebaceous glands, and
- irradiating the target gland (sebaceous gland) with laser light in the λ range btw. 700nm – 1200nm

(2) exogenous chromophore comprises:
- oils; surfactant; liposome; dye (ind cyanine green, Rhodamine B, and Cresyl violet)

(3) laser: 700nm ≤ λ ≤ 1200nm (wavelength)
(pulse duration) 1ms ≤ τ ≤ 100ms; and fluence 5–40 J/m²

****

STAFF USE ONLY

Searcher: Julie Walko
Searcher Phone #: 305-8587
Searcher Location: CP2-2C08
Date Searcher Picked Up: 4/24/03
Date Completed: 4/25/03
Searcher Prep & Review Time: 97m
Clerical Prep Time: _____
Online Time: 13m

Type of Search

NA Sequence (#) _____
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Structure (#) _____
Bibliographic ✓
Litigation _____
Fulltext ✓
Patent Family _____
Other _____

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Other (specify) _____

A61B
A61K
A61N

PTO-1590 (8-01)

Ahmed Farah
CP2-4D31

4/25/03

Ahmed:

Attached are the results of your requests regarding the use of a pulsed-dye laser to treat acne.

I had some difficulty finding the measurements you seek – you may need to request the full-text of promising patents or articles, although some did mention specific numbers. Although I marked a few items, I recommend you review the entire, especially the non-patent literature.

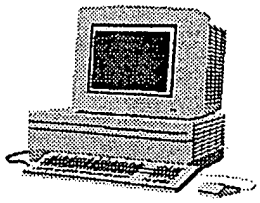
If you have any questions or would like the search reworked in any way, please don't hesitate to all me at 305-8587 or email me at Julie.walko@uspto.gov.

Sincerely,

Julie Walko
CP2 2C08

EIC3700/2900

Search Results Feedback Form (Optional)



Scientific & Technical Information Center

The search results generated for your recent request are attached. If you have any questions or comments (compliments or complaints) about the scope or the results of the search, please *contact the EIC searcher who performed your search (or either of us):*

John Sims, Team Leader, 308-4836, CP2-2C08
or Jeanne Horrigan, Searcher, 305-5934

Voluntary Results Feedback Form

- *I am an examiner in Workgroup:* ☐ *Example:* 3740

- *Relevant prior art **found**, search results used as follows:*
  - ☐ 102 rejection
  - ☐ 103 rejection
  - ☐ Cited as being of interest.
  - ☐ Helped examiner better understand the invention.
  - ☐ Helped examiner better understand the state of the art in their technology.

  Types of relevant prior art found:
  - ☐ Foreign Patent(s)
  - ☐ Non-Patent Literature
    (journal articles, conference proceedings, new product announcements etc.)

- *Relevant prior art **not found**:*
  - ☐ Results verified the lack of relevant prior art (helped determine patentability).
  - ☐ Search results were not useful in determining patentability or understanding the invention.

Other Comments:

Drop off completed forms in the inbox, EIC 3700/2900, CP2-2C08, or in CPK1-5A02. **Thanks!**

7/10/00

Treatment of Sebaceous Gland Hyperplasia With the Pulsed Dye Laser

Matthias P. Schönermark, MD, Christian Schmidt, MD, and
Christian Raulin, MD

Center for Dermatologic Laser Therapy, D-76133 Karlsruhe, Germany
and
Department of Otolaryngology/Head and Neck Surgery, Hanover Medical School, D-30623 Hannover, Germany

Background and Objective: Sebaceous gland hyperplasia may be treated by cryotherapy, cauterization, topical chemicals, or excision. The major disadvantage of these therapeutic strategies is a considerable risk of postoperative scarring or dyspig-mentation. The pulsed dye laser may be an effective and safe alternative treatment option. *Study Design and Methods:* Our report presents two patients with sebaceous gland hyperplasia who were treated with the pulsed dye-laser (585 nm, 6.5-8 J/cm2, 800-450/microsec).

Results: After 2-3 treatment sessions, the lesions were completely gone. To date, no side effects have been observed.

Conclusions: Based upon our experiences, we recommend the pulsed dye laser as a safe, fast, and minimal straining treatment alternative for hyperplasia of sebaceous glands.

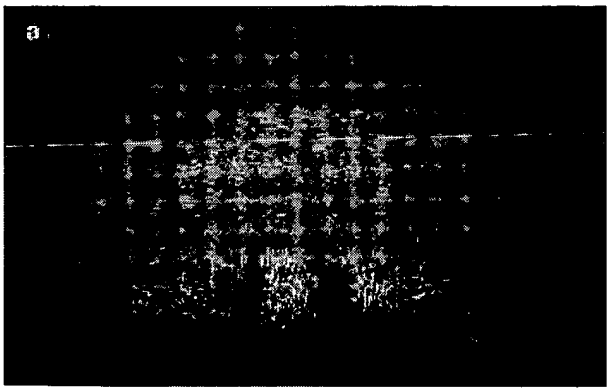
Key words: sebaceous gland hyperplasia; laser therapy; pulsed dye laser

INTRODUCTION

The established concepts for the treatment of sebaceous gland hyperplasia include cryotherapy, cauterization, excision of the lesion, and the topical application of drugs [1 – 3]. All of these strategies carry a considerable risk of disfigurative postoperative scarring or dyspigmentation. In addition, recurrence is a common phenomenon. Laser therapy of sebaceous gland hyperplasia has not been reported to date. We treated more than 40 patients with sebaceous gland hyperplasia with the pulsed dye laser. This treatment bypasses long operation hours, shortens the follow-up period, and when applied properly, does not lead to scar formation. The following two cases well demonstrate the effectiveness of the laser treatment.

MATERIALS AND METHODS Patients

Patient 1 was a 62-year-old woman who suffered from multiple hyperplastic lesions of the sebaceous glands, which were most prominent on the forehead (Fig. la). She was treated during three sessions with the pulsed dye laser (585 nm wavelength, 300 - 450 microsec pulse duration; Photo Genica V, Cynoshure, Boston, MA). We used the 5 mm laser probe with an energy dose of 7 J/cm2 in the first session and 8 J/cm2 in the two consecutive sessions.



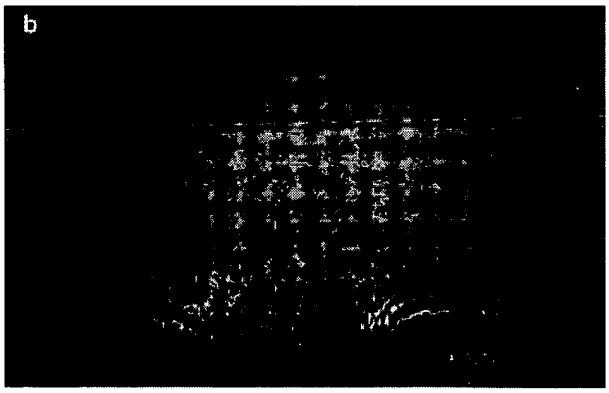


fig1: Sixty-two-year-old female patient with multiple sebaceous hyperplasia of the forehead: (a) before tratment, (b) after treatment sessions with the pulsed dye laser

Patient 2, a 58-year-old man, suffered from a single sebaceous gland hyperplasia of the forehead (Fig. 2a). Laser treatment was applied during two consecutive sessions (5 mm laser probe, 6.5 J/cm2 and 6.8 J/cm2 energy dose, respectively).

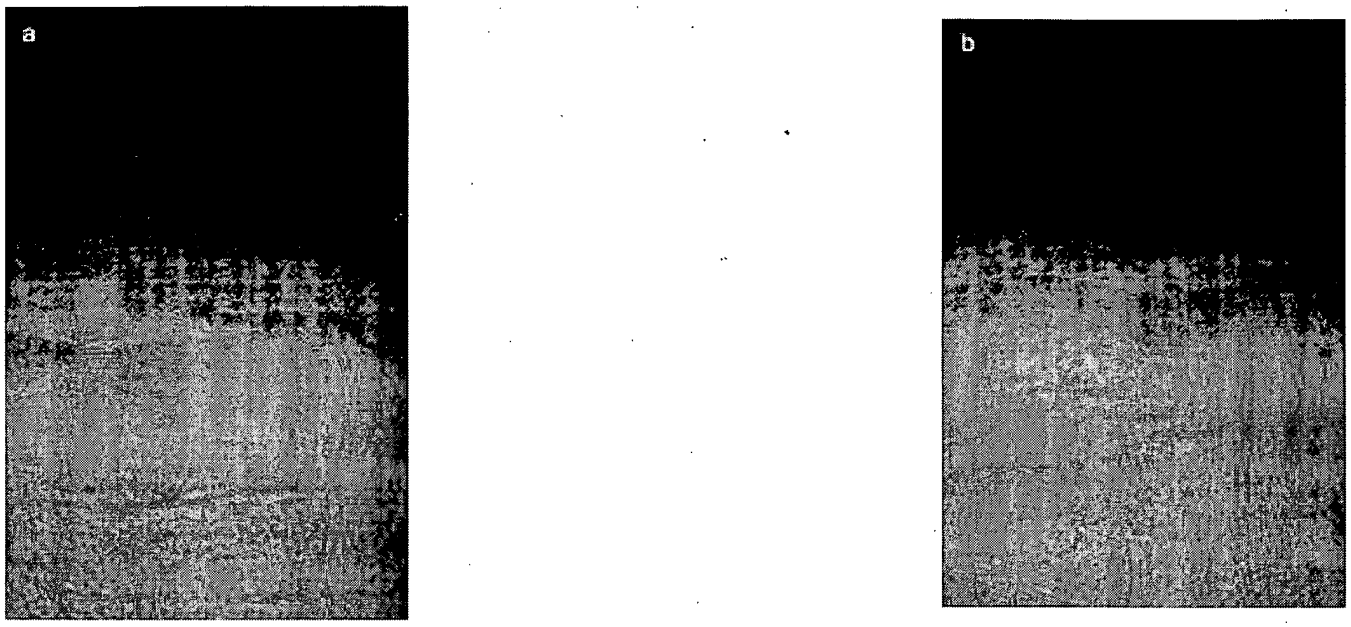


fig2: Fifty-year-old male patient with a single sebaceous gland hyperplasia of the horehead: (a)before tratment, (b) after two treatment sessions

RESULTS

The lesions of the female patient responded immediately to the first treatment and were completely gone after the third session (Fig. lb). Nine months after treatment, no scarring or recurrence showed up. The sebaceous gland hyperplasia of the male patient disappeared completely after three consecutive treatments, and there is no recurrence or scarring after 13 months (Fig. 2b).

DISCUSSION

Hyperplasia of the sebaceous glands presents clinically as singular or multiple papulous lesions with a central umbo, which represents a dilated excretion duct. They appear predominantly on the forehead, nose, cheeks. The approximate diameter of the lesion is 2 – 3 mm [4], although in a few isolated cases, nodules up to 5 cm diameter have been reported [5 – 7]. Histologi-cally, hyperplastic, sebaceous gland lobules can be seen that group around a central, massively dilated excretion duct [8]. Most of the cases are of unknown origin, but some reports describe systemic corticoid therapy [9,10] or hemodialysis [11] as the main cause for the lesions. In a recent study of 420 normal Australian newborns, sebaceous gland hyperplasia was found in **48%** of the study group [12]. In Indian newborns, the prevalence of sebaceous hyperplasia was found to be **81.8%** [13]. In general, the lesions disappeared spontaneously within the first months of life. Multiple hyperplastic lesions of sebaceous glands also were found in Muir-Torre syndrome [14,15], in the X-chromosomal hypohidrotic ectodermal dysplasia syndrome (X-HED) [16], and in pachy-dermoperiostosis [4,17], where they define the disease. In Muir-Torre syndrome, the sebaceous gland alterations, together with the other mandatory dermatoses, indicate the high risk for gastrointestinal malignomas [14,15].

The classical therapeutic concept for the treatment of sebaceous gland hyperplasia in eludes cryotherapy, cauterisation, topical drugs, or surgical excision [1 – 3]. These measures bear a considerable risk of posttherapeutic scarring or dyspigmentation, intra- and postoperative bleeding, and recurrence of the lesions [18]. In contrast, treatment with the pulsed dye laser never leads to hypertrophic scars, and the risk for atrophic scar

formation is **<0.1%** [19]. This is based on the focused destruction of dermal vessels by selective photothermolysis, which puts minimal stress on the surrounding tissue [20]. The exact mechanism of the pulsed dye laser in the treatment of sebaceous gland hyperplasia is not fully understood. We hypothesize the selective destruction of sebaceous gland supplying vessels, which in turn leads to a degeneration of the lesion [21].
In all our cases, the sebaceous gland hyperplasia could be removed with the pulsed dye laser in an outpatient setting. The treatment sessions were no longer than 10 min. One to three sessions in a 4-week interval were carried out. The moderate discomfort was easily endured by our patients. One day after treatment, a livid discoloration of the treatment area occurs, which resembles an intracutaneous hematoma. In general, we applied energy doses of 6-8 J/cm2. Higher doses led to delicate crusts, which should not be removed. All lesions healed without scarring. The hyperplastic sebaceous glands disappeared completely. We did not observe any therapy failure or any postoperative scarring in any of our patients.
An alternative to the pulsed dye laser may be the pulsed carbondioxide laser, or the pulsed Erbium-YAG laser. The optical energy of these laser types is strongly absorbed by the extracellular fluid, which causes a gentle "shaving" of thin tissue layers.
In summary, the treatment of sebaceous gland hyperplasia with the pulsed dye laser is an easy-to-use, painless, and method, which carries minimal risk of scarring or other side effects. We see the pulsed dye laser as an innovative and rewarding treatment alternative for the therapy of sebaceous gland hyperplasia. Further studies will elicit the mode of action of the dye laser in this particular disease.

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Dr. Jenifer R. Lloyd

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Inventor Search

11/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014956717 **Image available**
WPI Acc No: 2003-017231/200301
XRPX Acc No: N03-013125

Pigmented lesion or tattoo site treatment method for use in dermatology field, involves directing Q-switched laser twice onto lesion, with specific time interval in between

Patent Assignee: KOSCHMANN E C (KOSC-I); SIERRA R A (SIER-I); ZUKERAN A C (ZUKE-I)
Inventor: KOSCHMANN E C; **SIERRA R A** ; ZUKERAN A C
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020123782	A1	20020905	US 2001273165	A	20010303	200301	B
			US 200290694	A	20020304		

Priority Applications (No Type Date): US 2001273165 P 20010303; US 200290694 A 20020304
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020123782	A1		7	A61N-001/00	Provisional application US 2001273165

Abstract (Basic): US 20020123782 A1

NOVELTY - The pigmented lesion (12) is irradiated by directing single pulse Q-switched laser from a laser arrangement (10) onto the tissue site on which the lesion is present. After a time interval of less than 100 musec, the lesion is again irradiated with Q-switched laser.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for flash lamp excited Alexandrite laser arrangement.

USE - For treatment or removal of lesions e.g. **dermal** lesions such as nevus of ota, nevus of ito or **epidermal** lesions such as solar lentigenes, freckles, liver or age spots, birth marks, etc.

ADVANTAGE - By irradiating Q-switched laser on lesions and tattoos twice with the specified interval in between, the final laser pulse would not experience large scattering and is very effective. Hence, efficient treatment and removal of lesions and tattoos are performed in a single clinician visit.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic representations of laser apparatus for pigmented lesions and tattoos treatment.

Laser arrangement (10)
Pigmented lesion (12)
pp; 7 DwgNo 1/2

Title Terms: PIGMENT; LESION; TATTOO; SITE; TREAT; METHOD; DERMATOLOGY; FIELD; DIRECT; SWITCH; LASER; TWICE; LESION; SPECIFIC; TIME; INTERVAL
Derwent Class: P34; S05; V08
International Patent Class (Main): A61N-001/00
File Segment: EPI; EngPI

11/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014885108 **Image available**
WPI Acc No: 2002-705814/200276
Related WPI Acc No: 2001-366075; 2002-121536

XRPX Acc No: N02-556401

Laser treatment for preventing surgical scar on human tissue, involves directing laser beam onto wound or surgical site of patient within specific period from date of injury or surgical procedure

Patent Assignee: CHO G (CHOG-I); FURUMOTO H (FURU-I); SIERRA R A (SIER-I)
Inventor: CHO G; FURUMOTO H; **SIERRA R A**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020087207	A1	20020704	US 99231746	A	19990115	200276 B
			US 2001804491	A	20010312	

Priority Applications (No Type Date): US 99231746 A 19990115; US 2001804491 A 20010312
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020087207	A1		6	A61N-001/00	Cont of application US 99231746 Cont of patent US 6210426

Abstract (Basic): US 20020087207 A1

NOVELTY - A laser handpiece (14) connects with a pulse dye laser apparatus (12) which is energized to provide a laser light beam (20). The beam is directed onto a wound or surgical site of a patient after 2 days and before 2 months from the date of injury or surgical procedure on the patient.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for method of treating patient with wound or surgical site in pre-scarring condition.

USE - For preventing scars or wounds on human tissue caused by accidents, injury or surgery using laser treatment.

ADVANTAGE - Reduces fibroblast activity by providing a laser pulse which coagulates blood vessels in their initial formation stage and thus minimizes collagen formation to permit the injury or surgical site to have a more normal looking **skin** .

DESCRIPTION OF DRAWING(S) - The figure shows a schematic representation of the optical radiation apparatus and an appropriate handpiece directed towards a patient's wound site shown in cross-section.

Pulse dye laser apparatus (12)
Laser handpiece (14)
Laser light beam (20)
pp; 6 DwgNo 1/2

Title Terms: LASER; TREAT; PREVENT; SURGICAL; SCAR; HUMAN; TISSUE; DIRECT; LASER; BEAM; WOUND; SURGICAL; SITE; PATIENT; SPECIFIC; PERIOD; DATE; INJURY; SURGICAL; PROCEDURE
Derwent Class: P34; S05
International Patent Class (Main): A61N-001/00
File Segment: EPI; EngPI

11/5/3 (Item 3 from file: 350)

013991461 **Image available**
WPI Acc No: 2001-475676/200151
XRAM Acc No: C01-142591

Treating e.g. atrial arrhythmias, gastrointestinal disorders and inflammatory disease comprises administering new and known dihydropyrimidine derivatives (I) which are potassium channel function

inhibitors

Patent Assignee: BRISTOL-MYERS SQUIBB CO (BRIM); ATWAL K S (ATWA-I); BHANDARU R S (BHAN-I); FINLAY H (FINL-I); LLOYD J (LLOY-I); VACCARO W (VACC-I); YAN L (YANL-I)

Inventor: ATWAL K S; BRANDARU R S; FINLAY H; **LLOYD J** ; VACCARO W; YAN L; BHANDARU R S; VACCARO W D

Number of Countries: 095 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200140231	A1	20010607	WO 2000US32785	A	20001204	200151	B
AU 200118127	A	20010612	AU 200118127	A	20001204	200154	
NO 200202649	A	20020606	WO 2000US32785	A	20001204	200258	
			NO 20022649	A	20020605		
EP 1237891	A1	20020911	EP 2000980930	A	20001204	200267	
			WO 2000US32785	A	20001204		
KR 2002060255	A	20020716	KR 2002707194	A	20020605	200305	
US 20030022890	A1	20030130	US 99169091	P	19991206	200311	
			US 2000236037	P	20000928		
			US 2000729731	A	20001205		
CZ 200201949	A3	20030312	WO 2000US32785	A	20001204	200324	
			CZ 20021949	A	20001204		

Priority Applications (No Type Date): US 2000236037 P 20000928; US 99169091 P 19991206; US 2000729731 A 20001205

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200140231	A1	E	296	C07D-487/04	
Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
AU 200118127	A			C07D-487/04	Based on patent WO 200140231
NO 200202649	A			C07D-000/00	
EP 1237891	A1	E		C07D-487/04	Based on patent WO 200140231
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL RO SI					
KR 2002060255	A			C07D-487/04	
US 20030022890	A1			A61K-031/5513	Provisional application US 99169091
					Provisional application US 2000236037
CZ 200201949	A3			C07D-487/04	Based on patent WO 200140231

Abstract (Basic): WO 200140231 A1

NOVELTY - Treating atrial arrhythmias, fibrillation and flutter, supraventricular arrhythmias, gastrointestinal disorders, inflammatory or immunological disease, diabetes, cognitive disorders, migraine, epilepsy and IKur-associated conditions and controlling heart rate comprises administering new or known dihydropyrimidine derivatives (I).

DETAILED DESCRIPTION - Treating atrial arrhythmias, fibrillation and flutter, supraventricular arrhythmias, gastrointestinal disorders, inflammatory or immunological disease, diabetes, cognitive disorders, migraine, epilepsy and IKur-associated conditions and controlling heart rate comprises administering dihydropyrimidine derivatives of formula (I), their enantiomers, diastereomers or salts.

X1-X3=N, NR6, (CR7)q, (CHR7)q or CO to form a 5-7 membered saturated, partially unsaturated or aromatic ring;

R1-R7=(CH2)n-(Z1)m-(CH2)p-Z2, or

at least one pair of R1-R5 + attached atoms=carbocyclyl or heterocyclyl (both optionally substituted), or

R6 + R7 + attached atoms=carbocyclyl or heterocyclyl (both optionally substituted);

Z1=CZ3Z4, O, NZ3, S, SO, SO2, C(O), C(O)Z3, C(O)NZ4, C(S), C(=NOZ3) or alkyl, alkenyl, alkynyl, carbocyclyl, aryl or heterocyclyl (all optionally substituted);

Z2=H, OZ5, OC(O)Z5, NZ5-C(O)-Z6, NZ5-CO2-Z6, NZ5(CO)-NZ6Z7, NZ5Z6, NO2, halo, CN, C(O)Z5, CO2Z5, C(S)Z5, (C=NOZ5)Z6, C(O)NZ5Z6, C(S)NZ5Z6, SZ5, SOZ5, SO2NZ5Z6 or alkyl, alkenyl, alkynyl, carbocyclyl, aryl or heterocyclyl (all optionally substituted);

Z3-Z7=H, halo or alkyl, alkenyl, alkynyl, carbocyclyl, heterocyclyl or aryl (all optionally substituted), or

at least one pair of Z3-Z7 + attached atoms=carbocyclyl or heterocyclyl (both optionally substituted);

n, p=0-10 and when m is 0, then p is 0;

m=0 or 1, and

q=1-3.

INDEPENDENT CLAIMS are included for the following:

(1) new dihydropyrimidine derivatives of formula (II), and

(2) a composition comprising at least one compound (II) and a vehicle or carrier.

R3a=OZ5, OC(O)Z5, NZ5-C(O)2-Z6, NZ5-(CO)-NZ6Z7, NZ5Z6, (C=NOZ5a)Z6a, C(S)NZ5aZ6a, SZ5, SOZ5, SO2Z5, SO2NZ5Z6, C(O)Z3a-Z2a, halo, or alkyl, alkenyl, alkynyl, carbocyclyl, aryl or heterocyclyl (all optionally substituted);

Z2a=not H (sic) when Z3a is heterocyclyl;

Z3a=optionally substituted heterocyclyl;

Z5a=substituted alkyl or alkenyl, alkynyl, carbocyclyl, aryl or heterocyclyl (all optionally substituted);

Z6a=H or alkyl, alkenyl, alkynyl, carbocyclyl, aryl or heterocyclyl (all optionally substituted),

provided that Z6a is not H when Z5a is unsubstituted cycloalkyl, aryl or benzyl, or

NZ5aZ6a=optionally substituted heterocyclyl,

provided that Z5a and Z6a do not form unsubstituted piperidinyl, pyrrolidinyl or morpholinyl and provided that when R1 and R5 are each H, R2 is optionally substituted aryl, R4 is heterocyclyl substituted aryl and X1, X2 and X3 form a group of formula (i), then Z5a and Z6a do not form unsubstituted piperazinyl or N-alkyl substituted piperazinyl, and

R7a=H or alkyl.

ACTIVITY - Antiarrhythmic; cardiant; gastrointestinal; antiinflammatory; antidiabetic; immunomodulator; nootropic; anticonvulsant; antimigraine; antidiarrheal; laxative; antiasthmatic; respiratory; vasotropic; antiarthritic; antirheumatic; immunosuppressive; antiarteriosclerotic; cytostatic; auditory; ophthalmological; muscular; neuroprotective; antiparkinsonian; dermatological; antithyroid; nephrotropic; antibacterial; antipsoriatic; antiallergic; antiulcer; antianemic; osteopathic; hepatotropic; virucide; anti-HIV.

MECHANISM OF ACTION - Potassium channel function inhibitor; Kv1 subfamily of voltage gated K+ channels inhibitor.

A test is described, but no results are given.

USE - Used for treating atrial arrhythmias, fibrillation and flutter, supraventricular arrhythmias, gastrointestinal disorders (reflux esophagitis or motility disorders), inflammatory or immunological disease (chronic obstructive pulmonary disease), diabetes, cognitive disorders, migraine, epilepsy and IKur-associated conditions and controlling heart rate (claimed). (I) And (II) are also used for treating complications of cardiac ischemia, angina pectoris, constipation, diarrhea, disorders of vascular and visceral smooth muscle including asthma, venous insufficiency and impotence, rheumatoid

arthritis, graft rejection, asthma, atherosclerosis, cell proliferative disorders including restenosis and cancer, auditory system disorders, visual system disorders, diabetes, muscle disease, peripheral neuropathy, memory loss including Alzheimer's diseases and dementia and CNS mediated dysfunction including Parkinson's diseases and ataxia. (I) And (II) are also used for treating resistance by transplantation of organs or tissues, graft versus diseases, system lupus erythematosus, Hashimoto's thyroiditis, multiple sclerosis, myasthenia gravis, posterior uveitis, allergic encephelomyelitis, glomerulonephritis, infectious diseases caused by pathogenic microorganisms, inflammatory and hyperproliferative **skin** diseases, psoriasis, dermatitis, acne, alopecia areata, conjunctivitis, keratitis, gastric ulcers, ischemic bowel disease, necrotizing enterocolitis, intestinal lesions, Coeliaz diseases, proctitis, anemia, sarcoidosis, fibroid lung, idiopathic interstitial pneumonia, photoallergic sensitivity, Wegener's granuloma, Sjogren's syndrome, adiposis, gingiva lesions, periodontium, alveolar bone, substantia osses dentis, Pyoderma and Sezary's syndrome, Addison's disease, endotoxic shock, renal insufficiency, toxinosis, diseases caused by environmental pollution, ageing, diseases caused by histamine or leukotriene release, Behcet's disease, autoimmune hepatitis, cirrhosis, partial liver resection, acute liver necrosis, hepatitis, cytomegalovirus and HCMV infection, AIDS and trauma.

pp; 296 DwgNo 0/0

Title Terms: TREAT; ATRIUM; ARRHYTHMIC; GASTRO; DISORDER; INFLAMMATION; DISEASE; COMPRISE; ADMINISTER; NEW; DERIVATIVE; POTASSIUM; CHANNEL; FUNCTION; INHIBIT

Derwent Class: B02

International Patent Class (Main): A61K-031/5513; C07D-000/00; C07D-487/04

International Patent Class (Additional): A61K-031/505; A61K-031/519; A61P-009/06; C07D-231/00; C07D-235/00; C07D-239/00; C07D-239-00; C07D-519/00; C07D-231-00; C07D-487/04; C07D-235-00

File Segment: CPI

11/5/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013881863 **Image available**

WPI Acc No: 2001-366075/200138

Related WPI Acc No: 2002-121536; 2002-705814

XRPX Acc No: N01-266985

Skin **scar prevention method involves directing dye laser beam with preset fluence range towards surgical site before date of surgery**

Patent Assignee: CYNOSURE INC (CYNO-N)

Inventor: CHO G; FURUMOTO H; **SIERRA R A**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6210426	B1	20010403	US 99231746	A	19990115	200138	B

Priority Applications (No Type Date): US 99231746 A 19990115

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6210426	B1		6	A61N-005/006	

Abstract (Basic): US 6210426 B1

NOVELTY - A laser beam is generated by energizing pulse dye laser (10) communicated with laser hand piece (16) pulsed dye laser has fluence range of 2-12 J/cm2. The beam is directed towards surgical site two months before the date of surgery.

USE - For preventing scars on human tissue during surgery.

ADVANTAGE - Scar formation is prevented, since laser pulse intended to coagulate blood vessels in their initial formation stage.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic representation of optical radiation apparatus and hand piece directed towards wound site.

Energizing pulse dye laser (10)

Laser hand piece (16)

pp; 6 DwgNo 1/2

Title Terms: **SKIN** ; SCAR; PREVENT; METHOD; DIRECT; DYE; LASER; BEAM; PRESET; FLUENT; RANGE; SURGICAL; SITE; DATE; SURGICAL

Derwent Class: P34; S05

International Patent Class (Main): A61N-005/006

File Segment: EPI; EngPI

11/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

012063876 **Image available**

WPI Acc No: 1998-480787/199841

Related WPI Acc No: 2001-235016

XRAM Acc No: C98-145412

New nitric oxide synthase inhibiting N-heterocyclic compounds - used to treat e.g. inflammatory and auto-immune diseases, multiple sclerosis, stroke, Parkinson's disease and Alzheimer's disease, etc.

Patent Assignee: BERLEX LAB INC (BERL-N); PHARMACOPEIA INC (PHAR-N)

Inventor: ARNAIZ D O; BALDWIN J J; DAVEY D D; DEVLIN J J; DOLLE R E; ERICKSON S D; **MCMILLAN** K ; MORRISSEY M M; OHLMEYER M H J; PAN G; PARADKAR V M; PARKINSON J; PHILLIPS G B; YE B; ZHAO Z; OHLMEYER H H J; DOLLE R E I; MCMILLIAN K; DOLLE I; ELLWOOD R; PARADKAR V

Number of Countries: 082 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9837079	A1	19980827	WO 98US3176	A	19980219	199841	B
AU 9861749	A	19980909	AU 9861749	A	19980219	199905	
NO 9903996	A	19991018	WO 98US3176	A	19980219	199953	
			NO 993996	A	19990819		
GB 2338957	A	20000112	WO 98US3176	A	19980219	200005	
			GB 9919686	A	19990819		
EP 968206	A1	20000105	EP 98906555	A	19980219	200006	
			WO 98US3176	A	19980219		
CZ 9902967	A3	20000216	WO 98US3176	A	19980219	200016	
			CZ 992967	A	19980219		
CN 1252799	A	20000510	CN 98804281	A	19980219	200036	
SK 9901135	A3	20000711	WO 98US3176	A	19980219	200050	
			SK 991135	A	19980219		
NZ 337861	A	20010223	NZ 337861	A	19980219	200115	
			WO 98US3176	A	19980219		
AU 732969	B	20010503	AU 9861749	A	19980219	200129	
KR 2000075615	A	20001226	WO 98US3176	A	19980219	200134	
			KR 99707678	A	19990819		
GB 2338957	B	20010801	WO 98US3176	A	19980219	200144	
			GB 9919686	A	19990819		
JP 2002515058	W	20020521	JP 98536853	A	19980219	200236	
			WO 98US3176	A	19980219		
MX 9907670	A1	20011201	MX 997670	A	19990819	200282	

Priority Applications (No Type Date): US 9825124 A 19980217; US 97808975 A 19970219

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9837079	A1	E	358	C07D-403/04	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9861749	A				Based on patent WO 9837079
NO 9903996	A			C07D-000/00	
GB 2338957	A			C07D-403/04	Based on patent WO 9837079
EP 968206	A1	E			Based on patent WO 9837079
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
CZ 9902967	A3			C07D-401/14	Based on patent WO 9837079
CN 1252799	A			C07D-403/04	
SK 9901135	A3			C07D-403/04	
NZ 337861	A			C07D-403/14	Based on patent WO 9837079
AU 732969	B			C07D-403/04	Previous Publ. patent AU 9861749 Based on patent WO 9837079
KR 2000075615	A			C07D-401/04	Based on patent WO 9837079
GB 2338957	B			C07D-403/04	Based on patent WO 9837079
JP 2002515058	W		547	C07D-403/14	Based on patent WO 9837079
MX 9907670	A1			A61K-031/505	

Abstract (Basic): WO 9837079 A

N-heterocyclic compounds of formulae (I), (II) and (III) and their salts are new: A = R1, OR1, CON(R1)R2, P(O)[N(R1)R2]2, N(R1)COR2, N(R16)COR2, N(R1)R21, N(R16)CON(R1)R16, S(O)tR1, SO2NHCOR1, NHSO2R22, SO2N(R1)H, CONHSO2R22 or CH=NOR1; X, Y, Z = N or C(R19); U = N or C(R5), with specific provisos;; t = 0-2; ring B = optionally substituted N-heterocyclyl; ring D = optionally substituted carbocyclyl or optionally substituted N-heterocyclyl; R1, R2 = H, optionally substituted 1-20C alkyl, optionally substituted cycloalkyl, (0-8C)alkyl-R9, (2-8C)alkenyl-R9, (2-8C)alkynyl-R9, (2-8C)alkyl-R10 (optionally substituted by OH), (1-8C)alkyl-R11 (optionally substituted by OH) or optionally substituted heterocyclyl, or NR1R2 = optionally substituted N-heterocyclyl; R3 = H, alkyl, cycloalkyl, optionally substituted aryl, haloalkyl, (1-8C)alkyl-CON(R1)R2, (1-8C)alkyl-N(R1)R2, (1-8C)alkyl-R8, (2-8C)alkyl-R10, (1-8C)alkyl-R11 or heterocyclyl (optionally substituted by at least 1 of halo, alkyl, alkoxy and imidazolyl), or when Q is N(R6) or a direct bond to R3, R3 may also be aminocarbonyl, alkoxycarbonyl, alkylsulphonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl or C(=NR18)-NH2, or Q-R3 = COOH, CON(R1)R2, C(=NH)-N(R1)R2 or a group of formula (i); R4 = H, alkyl, aryl, aralkyl or cycloalkyl, provided that when A is R1 or OR1, R4 cannot be H, and when V is CH, R4 may also be OH; R5 = H, halo, alkyl, haloalkyl, optionally substituted aralkyl, optionally substituted aryl, OR16, S(O)t-R16, N(R16)R21, N(R16)CON(R1)R16, N(R16)COOR16, N(R16)COR16, (0-8C)alkylCOOR16, (0-8C)alkyl-CH(COOR16)2 or (0-8C)alkyl-CON(R1)R16; R6 = H, alkyl, cycloalkyl, (1-8C)alkyl-R8, (2-8C)alkyl-R10, (1-8C)alkyl-R11, acyl, COR8, CO-(1-8C)alkyl-R8, alkoxycarbonyl, optionally substituted aryloxycarbonyl, optionally substituted aralkoxycarbonyl, alkylsulphonyl, optionally substituted aryl, optionally substituted heterocyclyl, alkoxycarbonylalkyl, carboxyalkyl, optionally substituted arylsulphonyl, aminocarbonyl, monoalkylaminocarbonyl, dialkylaminocarbonyl, optionally substituted arylaminocarboyl, aminosulphonyl, monoalkylaminosulphonyl, dialkylaminosulphonyl, arylaminosulphonyl, arylsulphonylaminocarbonyl, optionally substituted N-heterocyclyl, C(=NH)-N(CN)R1, CO-R23-N(R1)R2,

CO-R23-N(R1)CO-R23-N(R1)R2 or CO-N(R1)-R23-COOR1; R8, R9 = haloalkyl, cycloalkyl (optionally substituted by halo, CN, alkyl or alkoxy), carbocyclyl (optionally substituted by at least 1 halo, alkyl or alkoxy) or heterocyclyl (optionally substituted by alkyl, aralkyl or alkoxy); R10 = halo, alkoxy, optionally substituted aryloxy, optionally substituted aralkoxy, optionally substituted S(O)t-R22, acylamino, amino, monoalkylamino, dialkylamino, (triphenylmethyl)amino, OH, mercapto or alkylsulphonamido; R11 = CN, di(alkoxy)alkyl, COOH, alkoxycarbonyl, aminocarbonyl, monoalkylaminocarbonyl or dialkylaminocarbonyl; R12-R15, R17, R20 = H or alkyl; R16 = H, alkyl, optionally substituted aryl, optionally substituted aralkyl or cycloalkyl; R18 = H, NO2 or toluenesulphonyl; R19 = H, alkyl (optionally substituted by OH), cyclopropyl, halo or haloalkyl or R19 + R19 = fused optionally substituted carbocyclyl or heterocyclyl; R21 = H, alkyl, cycloalkyl, optionally substituted aryl, optionally substituted aralkyl, COR22 or SO2R22, or N(R1)R21 = optionally substituted N-heterocyclyl, or N(R16)R21 = optionally substituted N-heterocyclyl; R22 = alkyl, cycloalkyl, optionally substituted aryl or optionally substituted aralkyl; R23 = an amino acid residue.

USE - (I)-(III) are inhibitors of nitric oxide synthase used in treatment and/or prevention of conditions including inflammatory and autoimmune diseases, particularly multiple sclerosis, stroke, cerebral ischaemia, Alzheimer's disease, Parkinson's disease, HIV dementia, meningitis, dilated cardiomyopathy and congestive heart failure, atherosclerosis, restenosis or graft stenosis, septic shock, hypotension, haemorrhagic shock, asthma, adult respiratory distress syndrome, smoke or particulate-mediated lung injury, pathogen-mediated pneumonias, trauma of various etiologies, rheumatoid arthritis, osteoarthritis, glomerulonephritis, systemic lupus erythematosus, inflammatory bowel diseases such as ulcerative colitis and Crohn's disease, insulin dependent diabetes mellitus, diabetic neuropathy or nephropathy, acute and chronic organ transplant rejection, transplant vasculopathies, graft versus host disease, psoriasis and other inflammatory **skin** diseases and cancer. (I)-(III) may also be used to manage male and female reproductive functions when used alone or in combination with other drugs e.g. to inhibit fertilisation, endometrial receptivity and implantation , as post-coital contraceptives, to induce abortion, to control and manage labour and delivery, to treat cervical incompetence or to treat endometriosis. Administration may be oral, rectal, parenteral or transdermal.

ADVANTAGE - (I)-(III) allow more selective therapy with reduced side effectsDwg.0/0

Title Terms: NEW; NITRIC; OXIDE; SYNTHASE; INHIBIT; N; HETEROCYCLE; COMPOUND; TREAT; INFLAMMATION; AUTO; IMMUNE; DISEASE; MULTIPLE; SCLEROSIS ; STROKE; PARKINSON; DISEASE; DISEASE

Derwent Class: B03

International Patent Class (Main): A61K-031/505; C07D-000/00; C07D-401/04; C07D-401/14; C07D-403/04; C07D-403/14

International Patent Class (Additional): A61K-031/506; A61K-031/5377; A61K-031/547; A61P-003/10; A61P-009/00; A61P-009/04; A61P-009/08; A61P-009/10; A61P-011/00; A61P-015/04; A61P-017/06; A61P-019/00; A61P-019/02; A61P-025/00; A61P-025/16; A61P-025/28; A61P-029/00; A61P-031/18; A61P-035/00; A61P-037/06; A61P-043/00; C07D-405/14; C07D-409/14; C07D-413/14; C07D-417/14; C07D-521/00

File Segment: CPI

11/5/6 (Item 6 from file: 350)

012020294 **Image available**
WPI Acc No: 1998-437204/199837
XRPX Acc No: N98-340626
Human skin wrinkle treatment method - directing beam of radiation of wavelength 1.3-1.8 microns to dermal region 100 micron to 1.2 mm below wrinkle to cause thermal injury
Patent Assignee: CANDELA CORP (CAND-N); GEN HOSPITAL CORP (GEHO); US SEC OF NAVY (USNA); MASSACHUSETTS GEN HOSPITAL (MASS-N); US GOVERNMENT (USGO)
Inventor: ANDERSON R R; HSIA J C; **MCMILLAN K** ; ROSS E V
Number of Countries: 019 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9833558	A1	19980806	WO 98US2123	A	19980205	199837	B
US 5810801	A	19980922	US 97794876	A	19970205	199845	
EP 1011811	A1	20000628	EP 98906128	A	19980205	200035	
			WO 98US2123	A	19980205		
US 6120497	A	20000919	US 97794876	A	19970205	200048	
			US 98153052	A	19980915		

Priority Applications (No Type Date): US 97794876 A 19970205; US 98153052 A 19980915
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9833558	A1	E	17	A61N-005/06	
Designated States (National): JP					
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
US 5810801	A			A61B-017/36	
EP 1011811	A1	E		A61N-005/06	Based on patent WO 9833558
Designated States (Regional): DE FR GB					
US 6120497	A			A61B-018/18	Cont of application US 97794876
					Cont of patent US 5810801

Abstract (Basic): WO 9833558 A
The method involves generating a beam of radiation having a wavelength of between 1.3 and 1.8 microns and a fluence of between 10 and 150 Joules per square centimetre. The beam is directed to a targeted **dermal** region between 100 microns and 1.2 millimetres below a wrinkle in the **skin** . Thermal injury is caused within the targeted **dermal** region to elicit a healing response that produces substantially unwrinkled **skin** .
The wavelength is preferably about 1.5 microns. The **skin** may be stretched along the wrinkle before directing the beam of radiation onto the **dermal** region.
ADVANTAGE - Surface of **skin** remains intact. Pigment disturbances are minimised. Inflammatory response to injury is mild.
Dwg.1/4
Title Terms: HUMAN; **SKIN** ; WRINKLE; TREAT; METHOD; DIRECT; BEAM; RADIATE; WAVELENGTH; MICRON; **DERMAL** ; REGION; MICRON; MM; BELOW; WRINKLE; CAUSE; THERMAL; INJURY
Derwent Class: P31; P34; S05; V07
International Patent Class (Main): A61B-017/36; A61B-018/18; A61N-005/06
File Segment: EPI; EngPI

11/5/7 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX

008791378 **Image available**
WPI Acc No: 1991-295393/199140
Related WPI Acc No: 1991-295394
XRAM Acc No: C91-127676
XRPX Acc No: N91-226292

Appts. treating dermal **and** epidermal **pigmentation abnormalities - has two lasers with different wavelength range and pulse time**

Patent Assignee: CANDELA LASER CORP (CAND-N); UNIV BOSTON (UYBO-N)
Inventor: FURUMOTO H; HSIA J C; TAN O T; CECCON H L; JONES C J; **MCMILLAN K**

Number of Countries: 017 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9113652	A	19910919				199140 B
AU 9174639	A	19911010				199201
AU 9175625	A	19911010				199201
US 5312395	A	19940517	US 90493309	A	19900314	199419
			US 92933873	A	19920821	

Priority Applications (No Type Date): US 90493309 A 19900314; US 92933873 A 19920821
Cited Patents: 1.Jnl.Ref; DE 2308554; WO 8704632
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9113652	A				
Designated States (National): AU BR JP US					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IT LU NL SE					
US 5312395	A		6	A61N-005/06	Cont of application US 90493309

Abstract (Basic): WO 9113652 A

Appts. comprises an **epidermal** treatment laser with wavelength of 345-600 nm, fluence of 1-10 J/cm2 at **skin** and pulse length less than 1 micros and a **dermal** treatment laser with wavelength of 600-1100 nm, fluence of 1-10 J/cm2 at the **skin** and pulse length less than 0.5 ns.

The first may be a dye laser and the second an alexandrite laser, or both may be dye lasers. A beam delivery system pref. illuminates a region 3 mm in diameter and includes a flexible liq. core light guide, the liq. pref. being tetrachloroethylene, deuterium oxide and inorganic salts, or CCl4, in a flexible thermostable cladding of lower refractive index.

USE/ADVANTAGE - E.g. for treating birthmarks, melanomas and tattoos, the wavelength range available is sufficiently wide to deal with the majority of cases and both **epidermal** and **dermal** problems. (36pp Dwg.No.1/6)

Title Terms: APPARATUS; TREAT; **DERMAL** ; **EPIDERMIS** ; PIGMENT; ABNORMAL; TWO; LASER; WAVELENGTH; RANGE; PULSE; TIME
Derwent Class: G04; P34; S05
International Patent Class (Main): A61N-005/06
File Segment: CPI; EPI; EngPI

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Set     Items   Description
S1         15   AU='SIERRA R':AU='SIERRA RAFAEL A'
S2          1   AU='MIRKOV M G'
S3         27   E3,E6
S4         74   AU='LLOYD J'
S5          9   AU='LLOYD J R'
S6          2   AU='LLOYD JENNIFER A'
S7        126   S1:S6
S8          1   S7 AND ACNE
S9         10   S7 AND (SKIN OR INTEGUMENT? OR DERMIS OR DERMAL? OR EPIDER-
              M?)
S10        10   IDPAT (sorted in duplicate/non-duplicate order)
S11         7   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2002/Dec(Updated 030402)
         (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Apr W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030417,UT=20030410
         (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200325
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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Biblio NPL

7/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

7191395 INSPEC Abstract Number: A2002-07-8750E-011
Title: Uptake of indocyanine green by hamster sebaceous **glands**
Author(s): McMillan, K.; Kai-Ming Lo; Zhi Wang
Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.4244 p.45-54
CODEN: PSISDG ISSN: 0277-786X
Conference Date: 20-23 Jan. 2001 Conference Location: San Jose, CA, USA
Abstract: Photothermal injury to the **sebaceous** glands is a potential curative treatment for the common skin disease acne vulgaris. Accumulation of the exogenous **chromophore** indocyanine green in the **sebaceous** glands may be accomplished using an emulsion or liposomal formulation applied to the skin surface. An emulsion containing 0.09% by weight indocyanine green (ICG) was applied to the epidermis of hamster ears ex vivo and the flank organ in vivo. Fluorescence microscopy demonstrated selective accumulation of ICG in the underlying **sebaceous** glands. The concentration of ICG that may be expected to accumulate in **sebaceous** glands of humans was then estimated on the basis of the gland size and orifice area, for the case of topical application of a more concentrated 1% ICG liposomal formulation. Monte Carlo modeling and heat transfer calculations showed that the **sebaceous** glands containing the exogenous **chromophore** may be selectively damaged by pulsed 810 nm **laser** radiation in conjunction with cryogen spray cooling. (18 Refs)
Identifiers: **liposomes** ; hamster ears epidermis; gland size; orifice area; more concentrated 1% ICG liposomal formulation; fluorescence microscopy; exogenous **chromophore** indocyanine green; **sebaceous** glands; liposomal formulation; photothermal injury; Monte Carlo simulation; common skin disease acne vulgaris; 810 nm
Numerical Indexing: wavelength 8.1E-07 m

7/5/2 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13153922 BIOSIS NO.: 200100361071
Targeting of sebaceous **follicles as a treatment of** sebaceous **gland disorders.**
AUTHOR: Anderson Richard Rox(a)
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1243 (1):pNo Pagination Feb. 6, 2001
MEDIUM: e-file
PATENT NUMBER: US 6183773 PATENT DATE GRANTED: February 06, 2001 20010206
PATENT ASSIGNEE: The General Hospital Corporation PATENT COUNTRY: USA
ISSN: 0098-1133

ABSTRACT: **Laser** treatments of **sebaceous** gland disorders with **laser** sensitive **dyes** are disclosed. A preferred **laser** treatment includes topical application of an energy activatable material to the skin followed by **laser** irradiation.

7/5/3 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12657593 BIOSIS NO.: 200000411095
Skin treatment process using laser .
AUTHOR: Tankovich Nikolai I(a); Sverdrup Lawrence H; Episcopo Richard G
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1232 (2):pNo pagination Mar. 14, 2000
MEDIUM: e-file
PATENT NUMBER: US 6036684 PATENT DATE GRANTED: March 14, 2000 20000314
PATENT ASSIGNEE: Thermolase Corporation, San Diego, CA, USA
PATENT COUNTRY: USA
ISSN: 0098-1133
DOCUMENT TYPE: Patent

ABSTRACT: The present invention provides a very simple easily administered skin treatment process for (1) the removal of superficial epidermal skin cells in the human skin (2) the reduction or removal of unwanted hair and (3) the mitigation of skin conditions such as acne and seborrhea. A contaminant having a high absorption at at least one wavelength of light is topically applied to a section of the surface of the skin. A preferred contaminant is a mixture of 20% by weight of one micron graphite particles in mineral oil . Graphite is a very strong absorber of 1.06 micron light produced by the Nd:YAG laser. . Portions of the contaminant are forced to infiltrate into spaces between the superficial epidermal cells, into hair ducts in the skin and into and/or adjacent to **sebaceous** glands. The skin section is illuminated with short laser pulses at the matching wavelength, so as to impact sufficient energy to the contaminant to cause explosion in the contaminant. The energy released in the course of the explosions may blow off layers of dead skin cells and/or destroy tissue responsible for hair growth and/or **sebum** production.

7/5/4 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08717343 BIOSIS NO.: 199395006694
Distribution and photosensitizing efficiency of porphyrins induced by application of exogenous 5-aminolevulinic acid in mice bearing mammary carcinoma.
AUTHOR: Peng Q(a); Moan J; Warloe T; Nesland J M; Rimington C
JOURNAL: International Journal of Cancer 52 (3):p433-443 1992
ISSN: 0020-7136

ABSTRACT: By means of a chemical extraction procedure and confocal **laser** scanning microscopy, we investigated the kinetic patterns of uptake and biolocalization of 5-aminolevulinic acid (ALA)-induced porphyrins in s.c. transplanted tumors, adjacent normal skin and muscle, and liver of mice bearing mammary carcinoma, after i.p. injection of 250 mg/kg ALA or topical application of ALA (20% in an oil-in-water emulsion). Furthermore, we evaluated the tumor responses after either i.p. injection or topical application of 5-ALA followed by **laser** irradiation (632 nm, 150 mW/cm2, 25 min) by measuring the treated tumor regression/regrowth time and by light and electron microscopy. Strong fluorescence of ALA-induced porphyrins was detected in the tumor, skin and liver tissues,

while little fluorescence was seen in the adjacent muscle tissue. Moreover, the highest amounts of ALA-induced prophyrins in the tumor and skin tissues were found 1 hour after i.p. injection, whereas the amounts of the porphyrins in both tissues increased with increasing time after topical application of ALA. The fluorescence of the porphyrins was localized in several components of the skin tissue (epidermis, hair follicles and their associated **sebaceous** glands). Furthermore, the fluorescence was diffusely distributed in the s.c. transplanted tumor tissue. Little could be observed under a confocal larser scan microscope (CLSM) in the muscle tissues. The uptake and biolocalization data correlate well with the results of PCT efficiency of the same tumor model with ALA-induced porphyrins. Light and electron microscopy showed that the mitochondria of the tumor cells and of the endothelial cells and the basal lamina of vascular walls beneath the endothelium in the tumor tissue were initially extensively destroyed after PCT with ALA-induced porphyrins. Therefore, diffuse degeneration followed by local and/or diffuse severe necrosis of the tumor cells was found. This may be due mainly to the initial damage to mitochondria in the cancerous and endothelial cells and also to the destruction of the vascular wall in the tumor tissue.

7/5/5 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

08794627 Genuine Article#: 329RW Number of References: 18
Title: Elucidating the pulsed- dye laser **treatment of** sebaceous **hyperplasia in vivo with real-time confocal scanning** laser **microscopy**
Author(s): Aghassi D; Gonzalez E; Anderson RR; Rajadhyaksha M; Gonzalez S (REPRINT)
Journal: JOURNAL OF THE AMERICAN ACADEMY OF DERMATOLOGY, 2000, V43, N1,1 (JUL), P49-53
ISSN: 0190-9622 Publication date: 20000700
Abstract: Background: Several case reports document successful treatment of **sebaceous** hyperplasia with the pulsed- **dye laser** . Moreover, noninvasive real-time confocal **laser** scanning microscopy elucidates the vascular nature of these lesions and their pathophysiologic response to treatment mediated by vessel coagulation.

Methods: Ten patients with 29 lesions of **sebaceous** hyperplasia were treated with 3 stacked 5-mm pulses of the 585-nm pulsed- **dye laser** at fluences of 7 or 7.5 J/cm(2). Confocal imaging was performed before and immediately after treatment, as well as at 2, 4, and 8 weeks of follow-up.

Results: The great majority of lesions responded to one treatment, with complete disappearance in 28%, decrease in diameter in 66%, and flattening in 93%. Although 28% recrudesced after initial involution, only 7% recurred completely Three lesions became eroded or crusted, and 7 experienced cutaneous depressions before complete healing, but no scarring or pigmentary side effects were noted. Confocal imaging revealed a prominent ''crown'' of blood vessels surrounding the **sebaceous** duct and coagulation of these vessels with pulsed- **dye laser** treatment. However, the vessels reappeared during follow-up, and no noticeable morphologic changes in the **sebaceous** duct were noted.

Conclusion: Vascular targeting of **sebaceous** hyperplasia can be monitored with real-time reflectance confocal microscopy. Most **sebaceous** hyperplasia regresses after one treatment with 3 stacked

pulses of the 585-nm pulsed- **dye laser** . Whether this response is due to temporary ischemia induced by selective vessel destruction or nonspecific thermal diffusion beyond the vessels from pulse stacking has not been determined.

7/5/6 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07909005 Genuine Article#: 223CH Number of References: 8
Title: Confocal imaging of sebaceous **gland hyperplasia in vivo to assess efficacy and mechanism of pulsed** dye laser **treatment**
Author(s): Gonzalez S (REPRINT) ; White WM; Rajadhyaksha M; Anderson RR; Gonzalez E
Journal: LASERS IN SURGERY AND MEDICINE, 1999, V25, N1, P8-12
ISSN: 0196-8092 Publication date: 19990000
Abstract: Background and Objective: This case demonstrates, for the first time, the use of in vivo confocal imaging to assess the efficacy of **laser** treatment of a skin lesion with a vascular component.

Study Design/Patient and Method A patient with lesions of **sebaceous** gland hyperplasia was histologically imaged in vivo before and after treatment with a 585-nm pulse **dye laser** (PDL) by using a near-infrared, confocal reflectance microscope. Hyperplastic **sebaceous** ducts and **sebaceous** glands were seen with high resolution in vivo. Prominent dermal vasculature was viewed as well as its selective targeting by PDL.

Conclusion: Our results confirm the previously reported successful treatment of **sebaceous** gland hyperplasia with the 585 nm PDL. **Lasers** Surg. Med. 25:8-12, 1999. (C) 1999 Wiley-Liss, Inc.

7/5/7 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

07315525 Genuine Article#: 149GZ Number of References: 45
Title: Pediatric dermatologic surgery for the primary care pediatrician
Author(s): Babich D; Crollick JS (REPRINT)
Journal: PEDIATRIC CLINICS OF NORTH AMERICA, 1998, V45, N6 (DEC), P1437-&
ISSN: 0031-3955 Publication date: 19981200
Abstract: This article addresses issues in basic office-based dermatologic surgery including anesthesia, biopsy decision-making techniques of cryosurgery, chemosurgery, and **laser** surgery. The surgical approach to common pediatric dermatologic conditions including congenital melanocytic nevi, aplasia cutis, nevus **sebaceous** , and port-wine stains are also discussed.
Identifiers--KeyWord Plus(R): PORT-WINE STAINS; CONGENITAL MELANOCYTIC NEVI; **DYE - LASER** TREATMENT; VENOUS CANNULATION; LOCAL-ANESTHESIA; APLASIA-CUTIS; CHILDREN; IONTOPHORESIS; LIDOCAINE; AMETHOCAINE

7/5/8 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

06167152 Genuine Article#: XZ309 Number of References: 21

Title: Treatment of sebaceous **gland hyperplasia with the pulsed** dye laser
Author(s): Schonermark MP; Schmidt C; Raulin C (REPRINT)
Journal: LASERS IN SURGERY AND MEDICINE, 1997, V21, N4, P313-316
ISSN: 0196-8092 Publication date: 19970000
Abstract: Background and Objective: **Sebaceous** gland hyperplasia may be treated by cryotherapy, cauterization, topical chemicals, or excision. The major disadvantage of these therapeutic strategies is a considerable risk of postoperative scarring or dyspigmentation. The pulsed **dye laser** may be an effective and safe alternative treatment option.

Study Design and Methods: Our report presents two patients with **sebaceous** gland hyperplasia who were treated with the pulsed **dye - laser** (585 nm, 6.5-8 J/cm(2), 300-450/mu sec).

Results: After 2-3 treatment sessions, the lesions were completely gone. To date, no side effects have been observed.

Conclusions: Based upon our experiences, we recommend the pulsed **dye laser** as a safe, fast, and minimal straining treatment alternative for hyperplasia of **sebaceous** glands. (C) 1997 Wiley-Liss, Inc.

7/5/9 (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01776542 Genuine Article#: HZ599 Number of References: 0
(NO REFS KEYED)
Title: EYELID TUMORS
Author(s): AGUILAR GL; EGBERT P
Journal: CURRENT OPINION IN OPHTHALMOLOGY, 1992, V3, N3 (JUN), P333-340
Language: ENGLISH Document Type: ARTICLE

7/5/10 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

07717118 EMBASE No: 1999210123
Photodynamic therapy for nevus sebaceus with topical delta-aminolevulinic acid
Dierickx C.C.; Goldenhersh M.; Dwyer P.; Stratigos A.; Mihm M.; Anderson R.R.; Hruza G.J.
Archives of Dermatology (ARCH. DERMATOL.) (United States) 1999, 135/6 (637-640)
CODEN: ARDEA ISSN: 0003-987X
NUMBER OF REFERENCES: 19
MANUFACTURER NAMES: Dusa/United States
DRUG DESCRIPTORS:
*aminolevulinic acid--drug administration--ad
lanolin alcohol
MEDICAL DESCRIPTORS:
*photodynamic therapy; * **sebaceous** nevus--therapy--th
argon **laser** ; **dye laser** ; histopathology; emulsion; human; female; case report; adult; topical drug administration; article; priority journal
CAS REGISTRY NO.: 106-60-5 (aminolevulinic acid); 8027-33-6 (lanolin alcohol)

7/5/11 (Item 1 from file: 144)
DIALOG(R)File 144:Pascal

15449929 PASCAL No.: 02-0142696
Pulsed dye laser **treatment of multiple eccrine hidrocystomas : A novel approach**
TANZI Elizabeth; ALSTER Tina S
Journal: Dermatologic surgery, 2001, 27 (10) 898-900
ISSN: 1076-0512 Availability: INIST-17417; 354000099888670120
BACKGROUND. Multiple eccrine hidrocystomas are benign cystic lesions that pose a significant treatment challenge due to their facial location and tendency to scar after traditional surgical and other destructive modalities. METHODS. A 585nm pulsed **dye** **laser** was used at fluences ranging 7.0 J/cm SUP 2 to 7.5 J/cm SUP 2 at 6- to 8-week intervals to treat multiple lesions on the face of a 54-year-old man. RESULTS. Near complete resolution of all papules was seen after four **laser** sessions. There was no evidence of lesional recurrence 18 months after the final treatment. CONCLUSION. The 585nm pulsed **dye** **laser** can effectively treat eccrine hidrocystomas. The mechanism of action whereby this vascular-specific **laser** produced improvement is unclear.

7/5/12 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

10827658 97178693 PMID: 9035914
Efficacy of barrier creams.
Grunewald A M; Gloor M; Gehring W; Kleesz P
Current problems in dermatology (SWITZERLAND) 1995, 23 p187-97, ISSN 0070-2064 Journal Code: 0147371
Descriptors: Benzenesulfonates--therapeutic use--TU; *Castor **Oil** --therapeutic use--TU; *Dermatitis, Irritant--prevention and control--PC; *Epidermis--drug effects--DE; *Ointments--therapeutic use--TU; *Siloxanes --therapeutic use--TU; *Sodium Dodecyl Sulfate--adverse effects--AE; *Stearates--therapeutic use--TU; *Waxes--therapeutic use--TU; Adult; Benzenesulfonates--pharmacology--PD; Body Water--metabolism--ME; Castor **Oil** --pharmacology--PD; Drug Combinations; Epidermis--metabolism--ME; Erythema--chemically induced--CI; Hydrogen-Ion Concentration; **Laser** -Doppler Flowmetry; Lipids--analysis--AN; Permeability--drug effects--DE; Regional Blood Flow; **Sebum** --chemistry--CH; Siloxanes--pharmacology--PD; Skin--blood supply--BS; Sodium Dodecyl Sulfate--pharmacokinetics--PK; Stearates--pharmacology--PD; Waxes--pharmacology--PD
CAS Registry No.: 0 (Benzenesulfonates); 0 (Drug Combinations); 0 (Lipids); 0 (Ointments); 0 (Siloxanes); 0 (Stearates); 0 (Waxes); 0 (marly skin); 0 (saniwip); 0 (tactosan); 151-21-3 (Sodium Dodecyl Sulfate); 8001-79-4 (Castor Oil)
Record Date Created: 19970221
Record Date Completed: 19970221

7/5/13 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

(c) format only 2003 The Dialog Corp. All rts. reserv.

09615488 21401147 PMID: 11509902
Investigation of follicular penetration of topically applied substances.
Lademann J; Otberg N; Richter H; Weigmann H J; Lindemann U; Schaefer H; Sterry W
Skin pharmacology and applied skin physiology (Switzerland) 2001, 14 Suppl 1 p17-22, ISSN 1422-2868 Journal Code: 9807277
The influence of specific follicle properties, **sebum** production and hair growth on the follicular penetration of topically applied substances was investigated. The behavior of follicles identified in selected skin areas of volunteers was analyzed by various tape stripping and staining methods in combination with **laser** scanning microscopy. Furthermore hair growth in the selected skin areas was determined. A correlation between **sebum** production, hair growth activity and follicular penetration was observed. Copyright 2001 S. Karger AG, Basel
Descriptors: *Hair Follicle--metabolism--ME; *Skin Absorption--physiology --PH; Administration, Topical; Cyanoacrylates; **Dyes** ; Hair--growth and development--GD; Hair Follicle--secretion--SE; Image Processing, Computer-Assisted; Microscopy, Fluorescence; Osmium Tetroxide; **Sebum** --secretion--SE
CAS Registry No.: 0 (Cyanoacrylates); 0 (Dyes); 20816-12-0 (Osmium Tetroxide)

7/5/14 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.

08108435 94174195 PMID: 8048975
[Rosacea]
Rosacee.
Decauchy F; Beauvais L; Meunier L; Meynadier J
La Revue du praticien (FRANCE) Nov 15 1993, 43 (18) p2344-8, ISSN 0035-2640 Journal Code: 0404334
Languages: FRENCH
Rosacea is a frequent disease which occurs mostly in women with dry skin and much more rarely in men with greasy skin. In women, rosacea is heralded, around the age of 20 years, by intermittent facial erythema, and this is followed by the gradual development of permanent erythema (erythrosis) with telangiectasia (couperose) and later on, around the age of 40, very unsightly papulo-pustules (papular rosacea, improperly called acne rosacea). In men, these successive stages are less frequent, but progressive dilatation of the nose due to **sebaceous** gland overgrowth may occur (rhinophyma). Rosacea is caused by vascular abnormalities not completely determined, and also, at the papulo-pustural stage, by a small parasite called Demodex folliculorum. Treatment rests on hygienic and dietary rules and vasoconstrictor drugs at the erythema stage, then on fine electrocoagulation or pulsed **dye laser** to suppress couperose and on the prescription of long-term low-dose tetracycline, sometimes preceded by a 2-month course of metronidazole to remove the papulo-pustules. Rhinophyma is treated by surgery. The results obtained are remarkable, at least on couperose, papulo-pustules and rhinophyma.

7/5/15 (Item 1 from file: 198)
DIALOG(R)File 198:Health Devices Alerts(R)

00666376 ABS-31772 SUBFILE: ABS
PRODUCT(s): 18-206 **LASERS** , **DYE** , DERMATOLOGIC
COMMON DEVICE NAME: Photo Genica V Pulsed **Dye** **Lasers**

MANUFACTURER: Cynosure Inc {179053}, 10 Elizabeth Dr, Chelmsford MA 01824

The authors report the use of a pulsed **dye** **laser** to treat a 62-year-old woman with multiple **sebaceous** gland hyperplastic lesions and a 58-year-old man with single **sebaceous** gland hyperplasia. The first patient demonstrated an immediate response to the first treatment, with total removal after the third session. Hyperplasia disappeared completely in the second patient after 3 consecutive treatments. Neither patient demonstrated scarring or recurrence at follow-up. The authors conclude that treating **sebaceous** gland hyperplasia with the pulsed **dye** **laser** is an easy, painless method with a minimal risk of scarring or other side effects.

SOURCE: Schonermark MP, Schmidt C, Raulin C. Treatment of sebaceous gland hyperplasia with the pulsed dye laser. "Lasers Surg Med" 1997;21(4):313-6.
PUBLICATION DATE: 9712

```
Set      Items   Description
S1    1437602   CHROMOPHOR? OR OIL OR OILS OR SUFACTANT? ? OR LIPOSOME? ? -
             OR DYE? ?
S2      21691   PILOSEBACEOUS OR SEBACEOUS OR SEBUM
S3    1687772   LASER? ?
S4         42   S1 AND S2 AND S3
S5         29   S4 NOT PY>2001
S6         16   RD (unique items)
S7         15   S6 NOT PD>20010807
? show files
File   2:INSPEC 1969-2003/Apr W2
         (c) 2003 Institution of Electrical Engineers
File   5:Biosis Previews(R) 1969-2003/Apr W3
         (c) 2003 BIOSIS
File   6:NTIS 1964-2003/Apr W4
         (c) 2003 NTIS, Intl Cpyrght All Rights Res
File   8:Ei Compendex(R) 1970-2003/Apr W2
         (c) 2003 Elsevier Eng.  Info. Inc.
File  34:SciSearch(R) Cited Ref Sci 1990-2003/Apr W3
         (c) 2003 Inst for Sci Info
File  35:Dissertation Abs Online 1861-2003/Mar
         (c) 2003 ProQuest Info&Learning
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         (c)2003 Japan Science and Tech Corp(JST)
File 144:Pascal 1973-2003/Apr W2
         (c) 2003 INIST/CNRS
File 155:MEDLINE(R) 1966-2003/Apr W3
         (c) format only 2003 The Dialog Corp.
File 172:EMBASE Alert 2003/Apr W3
         (c) 2003 Elsevier Science B.V.
File 198:Health Devices Alerts(R) 1977-2003/Apr W4
         (c) 2003 ECRI-nonprft agncy
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info
File  48:SPORTDiscus 1962-2003/Apr
         (c) 2003 Sport Information Resource Centre
File  71:ELSEVIER BIOBASE 1994-2003/Apr W3
         (c) 2003  Elsevier Science B.V.
File  91:MANTIS(TM) 1880-2002/Oct
         2002 (c) Action Potential
File 162:CAB Health 1983-2003/Mar
         (c) 2003 CAB International
File 164:Allied & Complementary Medicine 1984-2003/Apr
          (c) 2003 BLHCIS
File 467:ExtraMED(tm) 2000/Dec
         (c) 2001 Informania Ltd.
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FTNPL

9/3,K/7 (Item 7 from file: 442)
DIALOG(R)File 442:AMA Journals

00114965

Photodynamic Therapy for Acne Vulgaris With Topical 5-Aminolevulinic Acid (ARTICLE)

ITOH, YOSHIYASU; NINOMIYA, YOSHIHARU; TAJIMA, SHINGO; MD, AKIRA ISHIBASHI ; DERMATOLOGY, DEPARTMENT OF Tokorozawa, Japan The Cutting Edge: Challenges in Medical and Surgical Therapeutics
Archives of Dermatology
Sep, 2000; The Cutting Edge: tzd1093
LINE COUNT: 00162

... photodynamic therapy (ALA-PDT). Twenty percent ALA (A 7793; Sigma, St Louis, Mo) in an **oil** -in-water emulsion (Yoshida, Tokyo, Japan) was applied to a 5 X,5-cm area...

...Wood lamp examination, the affected lesion showed numerous dots of vivid red fluorescence corresponding to **pilosebaceous** units in a 5X5-cm/2/ square pinkish fluorescence area. The lesion was then exposed to a 635-nm **laser** light of 5 J/cm/2/ total using a pulsed excimer- **dye** **laser** (PDT EDL.1; HAMAMATSU, Hamamatsu-shi, Japan) without anesthesia. The patient tolerated irradiation well.

Immediately...

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Set     Items   Description
S1      74143   CHROMOPHOR? OR OIL OR OILS OR SUFACTANT? ? OR LIPOSOME? ? -
             OR DYE? ?
S2       1371   PILOSEBACEOUS OR SEBACEOUS OR SEBUM
S3      85296   LASER? ?
S4         59   S1 AND S2 AND S3
S5         56   RD (unique items)
S6         47   S5 NOT PD>20010807
S7          9   S1(S)S2(S)S3
S8          8   S7 NOT PD>20010807
S9          8   RD (unique items)
? show files
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Apr W3
         (c) 2003 ESPICOM Bus.Intell.
File 442:AMA  Journals 1982-2003/Aug B3
         (c)2003 Amer Med Assn -FARS/DARS apply
File 444:New England Journal of Med. 1985-2003/Apr W4
         (c) 2003 Mass. Med. Soc.
File  95:TEME-Technology & Management 1989-2003/Apr W1
         (c) 2003 FIZ TECHNIK
File  98:General Sci Abs/Full-Text 1984-2003/Mar
         (c) 2003 The HW Wilson Co.
File 149:TGG Health&Wellness DB(SM) 1976-2003/Apr W2
         (c) 2003 The Gale Group
File 369:New Scientist 1994-2003/Apr W2
         (c) 2003 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
         (c) 1999 AAAS
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FT Patents

9/5,K/2 (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00989954
METHOD AND APPARATUS FOR ACNE TREATMENT
METHODE ET APPAREIL POUR LE TRAITEMENT DE L'ACNE
Patent Applicant/Assignee:
LIGHT BIOSCIENCE INC, 3033 Little Haven Road, Virginia Beach, VA 23452, US, US (Residence), US (Nationality)
Inventor(s):
MCDANIEL David H, 3033 Little Haven Road, Virginia Beach, VA 23452, US,
Legal Representative:
JAESCHKE Wayne Jr (et al) (agent), Morrison & Foerster LLP, 1650 Tysons Boulevard, Suite 300, McLean, VA 22102, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200317824 A2 20030306 (WO 0317824)
Application: WO 2002US26627 20020822 (PCT/WO US0226627)
Priority Application: US 2001933870 20010822
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **A61B**
Publication Language: English
Filing Language: English

Bad Date

English Abstract
Disclosed is a system and method for treatment of skin disorders. More particularly, the disclosed invention is directed toward the treatment of acne and acne scarring by treating sebaceous oil glands and the surrounding tissue with an exogenous chromophore composition and then exposing the target tissue to visible, infrared, or ultraviolet light to inhibit the activity of the oil gland and eliminate acne bacteria. The treatment method of the present invention may be futher augmented by enhancing the penetration of the topical composition into the oil gland and surrounding tissue through the use of procedures including enzyme peeling, microderm abrasion, or ultrasound.

Legal Status (Type, Date, Text)
Publication 20030306 A2 Without international search report and to be republished upon receipt of that report.

Detailed Description
... varies greatly.

There are several processes which may be used for inhibiting the activity of **sebaceous oil** glands. In one process the target may be duct of the gland and the treatment focuses on the treatment of **sebaceous** follicles to eliminate the associated disorders. In U.S.Patent No.6,183,773, to Anderson, which is hereby incorporated by reference, an attempt is made to treat **sebaceous** gland disorders using **lasers** which irradiate energy activatable material, primarily **laser** sensitive **dyes** , that have been applied to the

skin.

Anderson teaches a method for treating skin disorders associated with **sebaceous** follicles by topically applying an energy activatable material to a section of skin afflicted with a **sebaceous** gland disorder, wherein the material is activated by energy which 0 penetrates outer layers of... sufficient energy to cause the material to become photochemically or photothernially activated, thereby treating the **sebaceous** gland disorder. In one embodiment, the **sebaceous** gland disorder is acne. Suitable energy sources for use in accordance with Anderson's invention include Rash lamp based sources and **lasers** , such as Nd: YAG, Alexandrite, flash lamp-pumped **dyes** and diodes. The energy source can be a continuous wave energy source or pulsed. In the preferred embodiment, the energy activatable material is a **laser** sensitive **chromophore** , e.g., a **chromophore** which is capable of being photoactived by a **laser** , e.g., a **dye** . Anderson describes a particularly preferred embodiment, wherein the **chromophore** is methylene blue.

Anderson's method, however, fails to take advantage of the recent developments...medically useful.

The targeted skin may be exposed to one or more wavelengths of LED, **laser** or non- **laser** light such as filtered filamentous sources or fluorescent sources or single or multiple frequencies of...with the agent or tissue complex. This results in the inhibition or destruction of the **sebaceous** **oil** gland or the supporting skin tissue through photomodulatory means, photothen-nal means, or combinations...chromophore may be desirable.

One preferred embodiment uses the transdennal application of chlorophyll to the **sebaceous** **oil** gland and surrounding tissue. The chlorophyll is then exposed to a source of electromagnetic radiation such as from a **laser** , an LED, a flash-lamp, or other source filtered to provide a dominant wavelength of...the range of about 300nm to about 1400nm based on the absorption spectrum of the **chromophore** or other light-activated topical composition used. Figure 7 shows the absoption spectrum for...

...absorption peak is shown to be at around 400ran. This would indicate that for this **chromophore** , the most suitable wavelength for photomodulator and/or photothernial treatment would be at around 400mu...run to 520nm). A comparison of the absorption spectra of various naturally occuring **chromophores** is shown in Figure 8.

One acne treatment process uses a solution of graphite in a carrier solution and a Q-switched 1064 mu ND:YAG **laser** . The solution may be applied to the skin which is then treated with the **laser** using known parameters. It may be preferable to use a high 1 5 repetition rate and move the **laser** handpiece slowly enough that pulses are "stacked' in one spot for several pulses before the...

...found that there is a stair-step like effect of incremental temperature rise in the **sebaceous** glands with the second and third pulses versus a single pulse. A faster repetition rate...

...the maximum heat (which is desirable, as long as the heat stays confined to the **sebaceous** glands and ...this effect occurs substantially simultaneously with other destructive effects of the process, the damage to **sebaceous** glands tends to be enhanced. Unlike carbon exploded particles on

light impact, the **dyes** and similar agents may actually remain absorbing for a brief time until they reach a...

...time, allowing more heat to accumulate than with carbon solutions and short pulsed Q-Switched **lasers** . Safety remains at about the same level, since **dye** related ...or alternatively two or more wavelengths, one for melanin and one or more for the **dye**). This melanin agent is delivered into the **sebaceous** gland, duct, or supporting tissue, resulting in an enhanced or greater injury to the target tissue (or permitting lower treatment energy parameters, resulting in safer treatment than if the **sebaceous** gland, duct, or supporting I 0 tissue were treated without the melanin **dye**). This tends to benefit people having darker skin or tanned skin, by allowing lower treatment energy. For example, a diode **laser** or LED or non- **laser** light source could produce a continuous or pseudo-continuous beam of light energy using pulse durations as long as seconds at a wavelength which is absorbed by the light-activated **chromophore** , native porphyrin containing acne bacteria porphyrin compound, or native **sebaceous** gland, duct, or supporting tissue piginent and also by the melanin or **dye** used. A pulse duration on the order of between about one and thirty seconds appears...

9/5,K/4 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00881548
TOPICAL AMINOLEVULINIC ACID-PHOTODYNAMIC THERAPY FOR ACNE VULGARIS
THERAPIE PHOTODYNAMIQUE TOPIQUE A L'ACIDE AMINOLEVULINIQUE POUR L'ACNE JUVENILE
Patent Applicant/Assignee:
THE GENERAL HOSPITAL CORPORATION d b a MASSACHUSETTS GENERAL HOSPITAL, 55 Fruit Street, Boston, MA 02114, US, US (Residence), US (Nationality)
Inventor(s):
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Legal Representative:
FALKOFF Michael I (et al) (agent), Nutter, McClennen & Fish, LLP, One International Place, Boston, MA 02110-2699, US,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200213788 A1 20020221 (WO 0213788)
Application: WO 2001US41691 20010813 (PCT/WO US0141691)
Priority Application: US 2000225691 20000816
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **A61K-009/00**
Publication Language: English
Filing Language: English

English Abstract
Light treatments of sebaceous gland disorders with 5-aminolevulinic acid and photodynamic therapy are disclosed. A preferred treatment includes topical application of 5-aminolevulinic acid to the skin followed by

light exposures with repeated treatment at various intervals. At low doses of ALA and photodynamic therapy (PDT) in single or multiple treatments, improvement in the sebaceous gland disorder, e.g., acne, provides the discovery that diminishment in sebum secretion and the eradication of bacteria occurs. At high doses of ALA and a single high energy PDT treatment, permanent changes to the sebaceous gland and sebum secretion have been discovered.

Legal Status (Type, Date, Text)
Publication 20020221 A1 With international search report.
Publication 20020221 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Examination 20021121 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description
In one aspect, the present invention is drawn to methods for treating **sebaceous** gland disorders by topically applying ALA to a section of skin afflicted with a **sebaceous** gland disorder. The ALA is converted in Pp1X via the protoporphyrin pathway, and the resultant...

...the resultant Pp1X to become photodynamically activated resulting in a physiological change, thereby treating the **sebaceous** gland disorder. In one embodiment, the **sebaceous** gland disorder is acne. Suitable energy sources include a wide range of pulsed or continuous...

...including, optical energy emitted by the sun, ultraviolet light generators, flash lamp based sources and **lasers** , such as Nd: YAG, Alexandrite, and flash lamp-pumped **dye** **lasers** and diode **lasers** . Alternatively, the energy source can be a continuous wave energy source, such as arc lamps...of surrounding tissue.

Suitable energy sources include light-emitting diodes, incandescent lamps, xenon arc lamps, **lasers** or sunlight. Suitable examples of continuous wave apparati include, for example, diodes. Suitable flash lamps include, for example pulse **dye** **lasers** and Alexandrite **lasers** .

Representative **lasers** having wavelengths strongly absorbed by PpIX, within the epidermis and infundibulum, or **sebaceous** gland, include the short-pulsed green **dye** **laser** (504 and 510 nm), yellow long-pulsed **dye** **laser** (585600 nm)the copper vapor **laser** (511 nm) and the Q-switched neodymium (Nd):YAG **laser** having a frequency doubled wavelength using a potassium diphosphate crystal to produce visible green light having a wavelength of 532 nm. Further examples of **lasers** which are suitable for use as energy sources include those in the following table of **lasers** .

...W average power 0,578 Copper vapor Pulsed, tens of watts 400-700 nm Pulsed **Dye** 0.1 to 10 Joules 514.5 mn Ar Ion up to tens of watts...

...material; Delivery of ALA to the follicle matrix can be achieved by topical application, injection, **liposome** encapsulation technology, massage, iontophoresis or ultrasonic technology, or other means for delivery of compounds into...

9/5,K/5 (Item 5 from file: 349)

00821449 **Image available**

METHOD AND APPARATUS FOR MEDICAL TREATMENT UTILIZING LONG DURATION ELECTROMAGNETIC RADIATION

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Patent Applicant/Inventor:
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SMOTRICH Michael, 82 Cambridge Street, Burlington, MA 01803, US, US (Residence), US (Nationality), (Designated only for: US)
ZENZIE Henry H, 14 Whiting Road, Dover, MA 02030, US, US (Residence), US (Nationality), (Designated only for: US)
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Legal Representative:
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Patent and Priority Information (Country, Number, Date):
Patent: WO 200154606 A1 20010802 (WO 0154606)
Application: WO 2001US2511 20010125 (PCT/WO US0102511)
Priority Application: US 2000177943 20000125; US 2000235814 20000927

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B-018/20**
Publication Language: English
Filing Language: English

English Abstract
A method and apparatus are provided for performing a medical procedure on a patient, for example a dermatological procedure, by use of electromagnetic radiation (EMR) having a relatively low peak power, and in particular a peak power low enough so as not to result in a phase change in the heater or chromophore absorbing radiation which would result in a significant reduction in its absorption, and of relatively long duration which is generally greater than, sometimes significantly greater than, the thermal relaxation time of the irradiated target.

Legal Status (Type, Date, Text)
Publication 20010802 A1 With international search report.
Publication 20010802 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

Examination 20011115 Request for preliminary examination prior to end of 19th month from priority date

Claim
...of the applied EMR and is heated as a result of this absorption. A natural **chromophore** can for example be water, melanin, hemoglobin, protein, or lipid. An artificial **chromophore** can for example be **dye** , ink, carbon particles or magnetic particles. The heating of the **chromophore** usually results in the destruction of an unwanted hair follicle, pigmented lesion, tattoo, blood vessel...

...epidermis to reach the treatment area, and since the epidermis contains melanin which is a **chromophore** at the wavelengths typically used for hair removal and certain other treatments, such high power...requirement to generate high peak power has required the use of large, and relatively expensive, **lasers** and other optical sources. For example, to generate the requisite peak power using diode **lasers** , a **laser** head having as many as 1 00 diode bars may be required, depending to some...

...Fig. 2 is a diagrammatic representation of a biological target with a spaced **chromophore** /heater and target area; Figs. 3a and 3b are diagrams illustrating optical power versus time... distribution as a function of depth for a cooled surface (I O'C) and a **laser** pulse duration of 1 second at roughly 15 0 j/CM2; Figs. 9a-9d axe...used for other dermatological treatments and for certain subdermal treatments, such as fat removal, acne (**sebaceous** gland) treatment or for other medical procedures normally performed by selectively applying EMR of an...

...sources currently or hereafter used or developed for EMR medical procedures, including various types of **lasers** , for example solid-state **lasers** and diode **lasers** , fiber **lasers** , Rash lamps, filament lamps and other sources of incoherent optical radiation, a microwave source, an ...shows the calculated temperature distribution for a cooled surface (1 0 degrees Celsius) and a **laser** pulse duration of one second at roughly 150 J/cm2. With this curve, collagen remodeling...

...and follicle. Where the applied radiation is at a wavelength selectively absorbed by fat, the **sebaceous** gland, which primarily contains fat or lipid, and which is also located at the depth of the bulge, may also function as a **chromophore** for the stem cells, either in addition to or instead of other chiornophores discussed herein cells for type IV patients), the lipid in the **sebaceous** gland and water in tissue surrounding the hair shaft (and possibly in the stem cells) are the only naturally-occurring **chromophores** adjacent to or in stem cells, it is also possible to introduce an artificial **chromophore** into this region for purposes of destroying the stem cells. Thus, a **dye** could be applied to the hair shaft, which **dye** migrates down the hair shaft at least to the level of the bulge, or an artificial **chromophore** such as carbon particles or magnetic particles of a selected optical quality can be applied...

9/5,K/6 (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00817293

TREATMENT OF ACNE USING LIPOIC ACID
TRAITEMENT DE L'ACNE A L'AIDE D'ACIDE LIPOIQUE

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Legal Representative:
KRINSKY Mary M (agent), 79 Trumbull Street, New Haven, CT 06511-3708, US,

Patent and Priority Information (Country, Number, Date):
Patent: WO 200149250 A2-A3 20010712 (WO 0149250)
Application: WO 2001US63 20010102 (PCT/WO US0100063)
Priority Application: US 99475514 19991230
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **A61K-031/045**
International Patent Class: **A61K-031/07** ; **A61K-031/27**
Publication Language: English
Filing Language: English

English Abstract
Active acne and acneiform scars are treated by topical application of a composition containing lipoic acid and/or a lipoic acid derivative such as dihydrolipoic acid, a lipoic or dihydrolipoic acid ester, a lipoic or dihydrolipoic acid amide, a lipoic or dihydrolipoic acid salt, and mixtures of any of these to reduce erythema, pore size, and scarring. Topical application of lipoic acid and/or a lipoic acid derivative are advantageously used with at least one adjunct ingredient such as a retinoid, an antibiotic, or benzoyl peroxide conventionally used for acne, alone or in combination with dimethylaminoalcohol, an alpha-hydroxy acid such as glycolic acid, a tyrosine, tocotrienol, and/or a fatty acid ester of ascorbic acid. One preferred embodiment contains a combination of lipoic acid, an alpha-hydroxy acid, and dimethylaminoalcohol.

Legal Status (Type, Date, Text)
Publication 20010712 A2 Without international search report and to be republished upon receipt of that report.
Search Rpt 20020110 Late publication of international search report
Republication 20020110 A3 With international search report.

Claim
... that ester, e.g., predominantly stearate, are included. The esters may be prepared using hydrogenated **oils** or fats, or fractions thereof, and contain small amounts of another ester. Ascorbyl stearate prepared...as adjunct acne therapy before, during, or after surgical procedures for acne, such as dermabrasion, **laser** ablation, scar revision, and chemical peels typically used for extreme cases of acneiform scars. In...

...bound to any theory, it may be that lipoic acid can boost energy production in **sebaceous** glands, which results in a more normal **sebum** production with triglycerides and lipids in normal ratios. Since lipogenesis in human **sebaceous** glands depends upon the metabolic status of the cells,

the addition of lipoic acid by...Lipoic acid was supplied by the Henkel Corporation and was placed into a lecithin-based **oil** -in-water cream at a level of 5% for use by acne patients. This composition...

9/5,K/7 (Item 7 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00576893 **Image available**
TARGETING OF SEBACEOUS FOLLICLES AS A TREATMENT OF SEBACEOUS GLAND DISORDERS
Patent Applicant/Assignee:
THE GENERAL HOSPITAL CORPORATION d b a,
Inventor(s):
ANDERSON Richard Rox,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200040266 A2 20000713 (WO 0040266)
Application: WO 99US29974 19991216 (PCT/WO US9929974)
Priority Application: US 99225026 19990104
Designated States: CA AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **A61K-041/00**
Publication Language: English

English Abstract
Laser treatments of **sebaceous** gland disorders with **laser** sensitive **dyes** are disclosed. A preferred **laser** treatment includes topical application of an energy activatable material to the skin followed by **laser** irradiation.

Detailed Description
Suitable energy sources include light-emitting diodes, incandescent lamps, xenon arc lamps, **lasers** or sunlight. Suitable examples of continuous wave apparati include, for example, diodes. Suitable Rash lamps include, for example pulse **dye** **lasers** and Alexandrite **lasers** . Representative **lasers** having wavelengths strongly absorbed by **chromophores** , e.g., **laser** sensitive **dyes** , within the epidermis and infundibulum but not **sebaceous** gland, include the short-pulsed red **dye** **laser** (5 04 and 5 1 0 mn), the copper vapor **laser** (511 mn) and the Q-switched neodymium (Nd):YAG **laser** having a wavelength of 1064 nm that can also be frequency doubled using a potassium...the present process, selective photoactivation is employed whereby an energy (light) source, e.g., a **laser** , is matched with a wavelength to the absorption spectrum of the selected energy activatable material, preferably a **chromophoric** agent, e.g., methylene blue at 661 mu. For example, an energy activatable material, adapted to accumulate selectively in the infimdibulum and/or the **sebaceous** gland, is first applied to the region of afflicted skin to be treated. Following absorption...

...e.g., a laser sensitive dye, will occur when exposed to millisecond light pulses.

A **laser** delivering pulses in the range of 1 to 50 milliseconds (rns) has been found to adequately photoactivate energy activatable materials, such as carbon particles, iron oxide particles and **laser** sensitive **dyes** , e.g., **chromophoric** materials, deposited within the hair follicle matrix, e.g., about the infimdibulum and **sebaceous** gland. Different types of energy

activatable materials require variations in the energy dose applied and...

...Delivery of the energy activatable material, preferably methylene blue or ...photodynarnic therapy) mechanisms are utilized to affect the target structures, as a treatment to prevent **sebaceous** gland disorders, such as acne lesions, from forming. Methylene blue (MB) and many other light sensitive **chromophores** are potent photodynamic photosensitizers and can also be used as photothermal sensitizers. The red absorption...

...of methylene blue around 660 run. provides strong absorption for either mechanism. Another strong candidate **dye** is indocyanine green (ICG) (CardiogreenS. Becton-Dickenson), which has very poor photodynamic activity but is an excellent phototherinal **chromophore** . Indocyanine green is a zwitterion (neutral, highly polar molecule) which tends to bind strongly to...

...photothermal mechanisms. ICG absorbs maximally near 800 mn, a wavelength well suited for diode, Alexandrite **lasers** , and other light sources. For selective photothermolysis, pulses of intense red or nearinfrared light in...

...time domain at the appropriate wavelength region should be delivered, for example using a pulsed **dye** **laser** , diode **laser** arrays, other pulsed or scanned **lasers** , or filtered flashlamp sources to deliver fluences in excess of 1 J/cm2 per pulse...For photodynamic effect, light sources such as light-emitting diodes, incandescent lamps, xenon are lamps, **lasers** or sunlight can be used...

9/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00568748 **Image available**
REDUCTION, ELIMINATION, OR STIMULATION OF HAIR GROWTH
Patent Applicant/Assignee:
MCDANIEL David H,
Inventor(s):
MCDANIEL David H,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200032121 A1 20000608 (WO 0032121)
Application: WO 99US28178 19991130 (PCT/WO US9928178)
Priority Application: US 98203178 19981130
Designated States: AU BR CA CN IL JP KR MX NZ SG AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **A61B-017/36**
Publication Language: English

English Abstract
A system for producing preferential damage to hair exiting mammalian skin. A agent having an average diameter for enabling the agent to penetrate the hair duct is selected. The agent is designed to attach to, or become physically incorporated into, the hair shaft, the hair follicle, the hair bulb or the hair duct. The agent has an electromagnetic radiation absorption characteristic which enables the agent to absorb a first wavelength of electromagnetic radiation from a skin-penetrating electromagnetic radiation source, such as a laser. The

agent is applied to the skin so that the agent penetrates the skin and attaches to or becomes physically incorporated into the hair shaft, the hair follicle, the hair bulb or the hair duct. The agent is exposed to the first wavelength of electromagnetic radiation and absorbs the first wavelength of electromagnetic radiation.

Detailed Description
... as indocyanine green and particles of carbon or graphite. A known technique for using a **laser** to produce a wavelength that may be absorbed by indocyanine green for a hair removal...

...or uniform targeting may be achieved. A preferred formulation may include indocyanine green or other **dyes** or agents to form a lipid complex which is fat-loving (lipophilic). The delivery and clinical effects of agents and **dyes** such as indocyanine green **dye** may ...to thereby increase the probability of preferential delivery, and/or that selectively attaches to the **sebaceous** gland and/or hair.

Indocyanine green dye is presently in medical use, appears to be...

9/5,K/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00529585 **Image available**
METHOD OF EPILATION BY TRANSCUTANEOUS LASER LIGHT
PROCEDE D'EPILATION PAR LUMIERE LASER TRANSCUTANEE
Patent Applicant/Assignee:
KERALASE LTD,
Inventor(s):
STEWART Bob W,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9960937 A1 19991202
Application: WO 99CA152 19990222 (PCT/WO CA9900152)
Priority Application: US 9884294 19980526
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **A61B-017/41**
Publication Language: English

English Abstract
A method of hair removal, used primarily for cosmetic purposes, comprising the transcutaneous use of laser light having a wavelength which targets the sebum found in the follicle and coating the hair, heating the sebum which transfer heat first to the hair and hair root and then to the papilla and papillary blood vessels via conduction, thus destroying the hair by photothermolysis while avoiding significant damage to surrounding skin or tissue.

9/5,K/11 (Item 11 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00359065 **Image available**
SKIN TREATMENT PROCESS USING LASER
PROCEDE DE TRAITEMENT CUTANE UTILISANT LE LASER
Patent Applicant/Assignee:
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TANKOVICH Nikolai I,
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EPISCOPO Richard E,
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TANKOVICH Nikolai I,
SVERDRUP Lawrence H Jr,
EPISCOPO Richard E,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9641579 A1 19961227
Application: WO 96US10155 19960612 (PCT/WO US9610155)
Priority Application: US 95489358 19950612
Designated States: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: **A61B-017/36**
Publication Language: English

English Abstract
This invention is a skin treatment process for the removal of superficial epidermal skin cells (12); the reduction or removal of unwanted hair (28); and the mitigation of skin conditions such as acne and seborrhea. A contaminant (4) having a high absorption at a wavelength of light is topically applied to a skin section. A preferred contaminant is a mixture of 20 % of one micron graphite particles in mineral **oil** . Portions of the contaminant are forced into spaces between the superficial epidermal skin cells, into hair ducts in the skin, and/or into adjacent **sebaceous** glands. The skin section is illuminated with **laser** pulses at the matching wavelength, so as to impart sufficient energy to the contaminant to cause explosion of the particles in the contaminant. The energy released by the explosions blows off layers of dead skin cells, and/or destroys tissue responsible for hair growth, and/or **sebum** production.

9/5,K/12 (Item 12 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00271863
METHODS OF LASER INDUCED TISSUE NECROSIS
PROCEDES DE NECROSE TISSULAIRE INDUITE PAR LASER
Patent Applicant/Assignee:
GREEN Howard A,
Inventor(s):
GREEN Howard A,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9420038 A1 19940915
Application: WO 94US2649 19940311 (PCT/WO US9402649)

Priority Application: US 9331242 19930312
Designated States: AU CA JP AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **A61B-017/36**
International Patent Class: **A61N-05:06**
Publication Language: English

English Abstract
A method for treating dermatological organ disorders and skin lesions in a mammal through the use of directed, pulsed laser light is described. The dermatological disorders are characterized by an increase in concentration of potential photodynamic chemical compounds like carotenoid compounds, and especially the carotenoid beta-carotene, compared to normal skin. Pulsed dye laser light of a time and duration specific for maximal absorption by a carotenoid compound like beta-carotene is directed at the regions of carotenoid accumulation within a skin disorder. Thermal coagulation necrosis of the carotenoid-accumulation skin region results, though thermal damage to surrounding tissue is limited in amount.

Detailed Description
... 425 to 550 nanometers, and more particularly, is about 504 nanometers.

The duration of each **laser** light pulse delivered is shorter than the time required for cooling of the target skin...

...those in a nanosecond and microsecond range are used for small diameter target tissues like **sebaceous** or xanthoma cells. Longer pulses within microsecond and millisecond ranges are used for larger diameter...

...xanthomas, Optimal pulse durations in SUBSTITUTE SHEET (RULE 26) a preferred embodiment with a pulsed **dye** **laser** range from about 250 nanoseconds to 10 milliseconds.

Radiant energy per pulse of laser light...

Claim
... increased carotenoid compound concentration compared to the region of mammalian skin;
b) directing a pulsed **laser** light beam at said area of skin; and
c) exposing the said area of skin to said pulsed **laser** light beam of selected pulse duration, and a wavelength of **laser** light between about 425 and 550 nanometers, and wherein the pulsed **laser** light beam contains radiant energy of between about 0.10 joules per square centimeter and...

...Claim 6, The method of claim 1 which includes pulsing the **laser** light beam between about 250 nanoseconds to 10 milliseconds.
Claim 7. The method of claim 1 wherein the **laser** light beam emanates from a pulsed **dye** **laser** .
Claim 8. The method of claim 1 wherein the pulsed **laser** light beam has a wavelength of about 504 nanometers...

...acceptable form of said carotene compound to the mammal;
c) directing a beam of pulsed **laser** light radiation having an energy of between about 0,10 and 10 joules per square centimeter and a wavelength of about 504 nanometers from a pulsed **dye** **laser** at said area of skin; and
d) exposing said area of skin to the beam of pulsed **laser** light radiation for a sufficient period of time to cause thermal coagulation necrosis within

the...group consisting-of eruptive, tuberous, tendinous, and plane xanthomas; xanthelasmata; xanthoma disseminatum; juvenile xanthogranulomas; nevus **sebaceous** ; **sebaceous** hyperplasia; adenoma, and carcinoma; fordyces condition; sebaceoma; **sebaceous** glands; acne vulgaris, conglobata, and rosacea; and basal cell carcinoma with **sebaceous** differentiation.

Claim 12. The method of claim 1 wherein the said cells are **sebaceous** cells.

Claim 13 . The method of claim 1 wherein the said cells are xanthomatous cells...

9/TI/1 (Item 1 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

TOPICAL APPLICATION OF CHROMOPHORES FOR HAIR REMOVAL
APPLICATION TOPIQUE DE CHROMOPHORES POUR L'EPILATION

9/TI/3 (Item 3 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

SKIN CARE COMPOSITION
COMPOSITION DE SOINS DE LA PEAU

9/TI/10 (Item 10 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

METHOD OF HAIR DEPILATION

```
Set      Items   Description
S1      297537   CHROMOPHOR? OR OIL OR OILS OR SUFACTANT? ? OR LIPOSOME? ? -
              OR DYE? ?
S2        3296   SEBACEOUS OR SEBUM
S3      128605   LASER? ?
S4         276   S1 AND S2 AND S3
S5         166   S4 AND IC=(A61K OR A61N)
S6          12   S1(S)S2(S)S3
S7          12   S6 AND IC=(A61B OR A61N OR A61K)
S8          12   IDPAT (sorted in duplicate/non-duplicate order)
S9          12   IDPAT (primary/non-duplicate records only)
? show files
File 348:EUROPEAN PATENTS 1978-2003/Apr W02
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030417,UT=20030410
         (c) 2003 WIPO/Univentio
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B. bio Patents

6/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014508824
WPI Acc No: 2002-329527/200236
XRAM Acc No: C02-095168

Treatment of sebaceous **gland disorder, e.g. acne or** sebaceous **gland hyperplasia, comprises topically applying 5-aminolevulinic acid to skin and exposing the skin to energy source**

Patent Assignee: GEN HOSPITAL CORP DBA MASSACHUSETTS GEN (GEHO); ANDERSON R R (ANDE-I)
Inventor: ANDERSON R R
Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200213788	A1	20020221	WO 2001US41691	A	20010813	200236	B
AU 200191260	A	20020225	AU 200191260	A	20010813	200245	
US 20020099094	A1	20020725	US 2000225691	A	20000816	200254	
			US 2001929384	A	20010814		

Priority Applications (No Type Date): US 2000225691 P 20000816; US 2001929384 A 20010814
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200213788	A1	E	57	A61K-009/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200191260	A		A61K-009/00	Based on patent WO 200213788
US 20020099094	A1		A61K-031/195	Provisional application US 2000225691

Abstract (Basic): WO 200213788 A1

NOVELTY - Treatment of **sebaceous** gland disorder comprises:

(A) topically applying 5-aminolevulinic acid (ALA) to affected section of skin;

(B) causing ALA to infiltrate into spaces in the skin; and

(C) exposing the infiltrated section of the skin to about 10 J/cm2 of energy

DETAILED DESCRIPTION - Treatment of **sebaceous** gland disorder comprises:

(A) topically applying 5-aminolevulinic acid (ALA) to affected section of skin, where the ALA is compounded for delivery to **sebaceous** gland and is converted into a photosensitizing agent by energy that penetrates outer layers of epidermis;

(B) causing ALA to infiltrate into spaces in the skin; and

(C) exposing the infiltrated section of the skin to about 10 J/cm2 of energy to cause the photosensitizing agent to become activated and durably modulate the **sebaceous** gland disorder.

INDEPENDENT CLAIMS are also included for:

(1) A method for modifying pilosebaceous units comprising:

(a) topically applying ALA to the section of the subject's skin, compounding the ALA to enter the subject's skin and get converted into photosensitizing agent localized at pilosebaceous unit and photo-actuable by energy which penetrates outer layers of epidermis; and

(b) exposing the section of the skin to energy (at least 10 J/cm2)

claim 18

to cause photosensitizing agent to become activates and modify the pilosebaceous unit;

(2) A sensitizing agent which activates and modifies the pilosebaceous unit;

(3) A method of treating acne comprising topically applying ALA (0.1 - 1 wt.%) to the skin afflicted with acne and exposing the infiltrated section of the skin to the energy;

(4) A method for permanent cessation of acne comprising:

(a) topically applying ALA (10 - 30 wt.%) to the afflicted skin;

(b) causing ALA infiltrate skin; and

(c) exposing the skin to energy (50 - 200 J/cm2) to cause the photosensitizing agent to become photodynamically activated, thus causing microscarring about the **sebaceous** glands in the afflicted area; and

(5) A method of treating acne comprising:

(a) topically applying ALA (0.1 - 30 wt.%) to the skin which absorbs UV radiation in the UVA or UVB range, thus converting ALA into photosensitizing agent that is activated by energy;

(b) causing ALA to infiltrate the pilosebaceous unit; and

(c) exposing the infiltrated section of the skin to sunlight in a range of 1 - 50 J/cm2 to cause the photosensitizing agent to activate eradicating bacteria associated with acne.

ACTIVITY - Antiseborrheic; Dermatological.

No biological data available.

MECHANISM OF ACTION - Inhibitor; Modulator.

No biological data available.

USE - In the amelioration of **sebaceous** gland disorders such as acne vulgaris, acne rosacea and **sebaceous** gland hyperplasia; for permanent cessation of acne (claimed).

ADVANTAGE - The method permanently decreases size of **sebaceous** glands and reduces **sebum** production in the **sebaceous** glands. It provides diminishment of the **sebaceous** gland disorder for at least 5 (preferably at least 10, especially at least 20) weeks. The method modifies pilosebaceous units and provides permanent cessation of acne.

Also the method is efficient, non-irritating and long lasting. It can permanently alter the pilosebaceous unit, rendering it no longer susceptible to pore pluggage without the side effects associated with oral retinoids.

pp; 57 DwgNo 0/12

Title Terms: TREAT; **SEBACEOUS** ; GLAND; DISORDER; ACNE; **SEBACEOUS** ; GLAND; HYPERPLASIA; COMPRISE; TOPICAL; APPLY; ACID; SKIN; EXPOSE; SKIN; ENERGY; SOURCE

Derwent Class: B05; P34

International Patent Class (Main): A61K-009/00; A61K-031/195

International Patent Class (Additional): A61N-001/30

File Segment: CPI; EngPI

6/5/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013293932

WPI Acc No: 2000-465867/200040

XRAM Acc No: C00-140306

Treating a sebaceous **gland disorder e.g. acne by applying energy activatable material to skin, allowing infiltration to occur and photochemically/photothermally activating the material**

Patent Assignee: GEN HOSPITAL DBA MASSCHUSETTS GEN HOSPIT (GEHO); GEN HOSPITAL CORP (GEHO)

Inventor: ANDERSON R R
Number of Countries: 021 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200040266	A2	20000713	WO 99US29974	A	19991216	200040	B
US 6183773	B1	20010206	US 99225026	A	19990104	200109	
EP 1140180	A2	20011010	EP 99968490	A	19991216	200167	
			WO 99US29974	A	19991216		

Priority Applications (No Type Date): US 99225026 A 19990104
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200040266	A2	E	43	A61K-041/00	
Designated States (National): CA					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
US 6183773	B1			A61K-009/127	
EP 1140180	A2	E		A61K-041/00	Based on patent WO 200040266
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					

Abstract (Basic): WO 200040266 A2

NOVELTY - Treating a **sebaceous** gland disorder comprising topically applying an energy activatable material to skin afflicted with the disorder, where the material is activated by energy which penetrates the outer epidermal layer, causing the material to infiltrate into spaces in the skin, and exposing the section of skin to energy to photochemically or photothermally activate the material, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) modifying the opening to the infundibulum or the pilosebaceous unit comprising:

(a) topically applying an energy activatable material to skin afflicted with the disorder, where the material is activated by energy which penetrates the outer epidermal layer;

(b) causing the material to infiltrate the infundibulum or the pilosebaceous unit; and

(c) exposing the section of skin to energy to photochemically or photothermally activate the material.

(2) treating a **sebaceous** disorder, comprising:

(a) topically applying, to a section of skin afflicted with a **sebaceous** disorder, the energy activatable material which is activated by energy which penetrates outer layers of epidermis;

(b) iontophoretically causing the material to infiltrate into spaces in the skin; and

(c) exposing the sections of skin to energy to photochemically/photothermally activate the material; and

(3) modifying the opening to the infundibulum or the pilosebaceous unit comprising:

(a) topically applying to the opening of the infundibulum or pilosebaceous unit the energy activatable material which is activated by energy which penetrates outer layers of epidermis ;

(b) iontophoretically causing the material to infiltrate into the infundibulum, or pilosebaceous unit; and

(c) exposing the sections of skin to energy to photochemically/photothermally activate the material.

ACTIVITY - Antiseborrheic; dermatological.

MECHANISM OF ACTION - The method modifies the opening to the infundibulum and/or pilosebaceous.

USE - The method is useful for treating **sebaceous** gland

disorders, especially acne vulgaris, acne resacea or **sebaceous** gland hyperplasia (claimed).
pp; 43 DwgNo 0/10
Title Terms: TREAT; **SEBACEOUS** ; GLAND; DISORDER; ACNE; APPLY; ENERGY; ACTIVATE; MATERIAL; SKIN; ALLOW; INFILTRATE; OCCUR; PHOTOCHEMICAL; ACTIVATE; MATERIAL
Derwent Class: B04
International Patent Class (Main): A61K-009/127; A61K-041/00
International Patent Class (Additional): A61K-007/06; A61K-031/54
File Segment: CPI

6/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012988963 **Image available**
WPI Acc No: 2000-160816/200014
Related WPI Acc No: 2003-017566; 2003-199743
XRAM Acc No: C00-050242
XRPX Acc No: N00-119976

Apparatus for photodynamic treatment of acne vulgaris and seborrhea, includes a light source with spectral emittance concentrated in a narrow band and an optical system for collecting and shaping the light

Patent Assignee: HARTH Y (HART-I); KORMAN A (KORM-I); CURELIGHT LTD (CURE-N)
Inventor: HARTH Y; KORMAN A
Number of Countries: 087 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200002491	A1	20000120	WO 99IL374	A	19990707	200014	B
AU 9946450	A	20000201	AU 9946450	A	19990707	200028	
EP 1100366	A1	20010523	EP 99929674	A	19990707	200130	
			WO 99IL374	A	19990707		
US 20010023363	A1	20010920	US 9892225	P	19980709	200156	
			WO 99IL374	A	19990707		
			US 2001756130	A	20010109		
JP 2002526128	W	20020820	WO 99IL374	A	19990707	200258	
			JP 2000558758	A	19990707		

Priority Applications (No Type Date): US 9892225 P 19980709; US 2001756130 A 20010109
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200002491	A1	E	29	A61B-017/36	
Designated States (National): AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZA ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
AU 9946450	A			A61B-017/36	Based on patent WO 200002491
EP 1100366	A1	E		A61B-001/00	Based on patent WO 200002491
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
US 20010023363	A1			A61N-005/06	Provisional application US 9892225
					CIP of application WO 99IL374
JP 2002526128	W		30	A61N-005/06	Based on patent WO 200002491

Abstract (Basic): WO 200002491 A1

NOVELTY - An apparatus for photodynamic treatment of acne vulgaris and seborrhea, comprises at least one source (13) with spectral emittance concentrated in at least one specific narrow spectral band of 405-440 nm, an optical system for collecting and shaping the emitted light, and an electronic control unit to control duration, power or emitted spectral bands of the light source emittance.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a method of treating acne vulgaris and seborrhea with light radiation source having narrow spectral bands of violet/blue (405-440nm), red (630-670nm) and green (520-550nm) light, comprising

(a) applying at least one compound from topical oxygen transporting perfluorocarbon, oxidative agent, keratolytic agent, or methylene blue solution to the treated skin area;

(b) illuminating the treated skin area with the light radiation source; and

(c) at least one additional exposure after a time game of at least 24hours.

ACTIVITY - Antiseborrheic; dermatological.

MECHANISM OF ACTION - The visible lights used cause oxygen to react with the porphyrins in the **sebaceous** glands, forming peroxides. The peroxides are short-lived toxic compounds which are able to eliminate or diminish the number of bacteria in the glands.

USE - The apparatus is used for the photodynamic treatment of acne vulgaris and seborrhea (claimed).

ADVANTAGE - The oxygenation of the skin during the phototheraphy process raises the efficiency of the desired photodestruction of Propionibacterium acnes and decreases acne lesion number and severity. The apparatus presents a major advance towards the goal of using phototherapy to effectively and to safely treat acne and seborrhea. It emits high intensity non-coherent light in the exact narrow spectral band needed for the activation of the photodynamic reaction flittering the harmful ultraviolet light. This narrow and specific wavelength range radiation enables the administration of sufficient intensity of light to the deeper layers of the dermis without excessive heat formation in the epidermis. The invention enables to treat various parts of the patient's body with ability to control the illumination power, energy spatial configuration, exposure duration and illumination source emittance spectral bands.

DESCRIPTION OF DRAWING(S) - The figure shows a front and side view of the photodynamic treatment apparatus.

Mechanical fixture (9)
Mechanical shutter (12)
Light source (13)
Light beam (21)
pp; 29 DwgNo 1/7

Title Terms: APPARATUS; TREAT; ACNE; VULGARIS; SEBORRHOEA; LIGHT; SOURCE; SPECTRAL; EMIT; CONCENTRATE; NARROW; BAND; OPTICAL; SYSTEM; COLLECT; SHAPE; LIGHT
Derwent Class: B05; P31; P34; S05
International Patent Class (Main): A61B-001/00; A61B-017/36; A61N-005/06
File Segment: CPI; EPI; EngPI

Good for claim 7 & 11

6/5/7 (Item 7 from file: 350)

010719625
WPI Acc No: 1996-216580/199622
XRAM Acc No: C96-068625
XRPX Acc No: N96-181909

Image receiving sheet, for thermal sensitive transfer recording - has an image receiving layer accepting a thermal migrating dye **from a hot transfer medium on a base material, etc. providing high resistance to UV rays**

Patent Assignee: MITSUBISHI PAPER MILLS LTD (MITY)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 8080683	A	19960326	JP 94219714	A	19940914	199622	B

Priority Applications (No Type Date): JP 94219714 A 19940914
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 8080683	A		14	B41M-005/38	

Abstract (Basic): JP 8080683 A

An image receiving layer accepting a thermal migrating **dye** from a hot transfer medium is provided on a base material. An overcoat layer is provided on the image receiving layer. The overcoat layer is formed by coating a polysiloxane polymer, 0.05-5.0 g./m2 in dried solid portion, consisting of metal alcoholate, organosilane and organopolysiloxane as essential components on the image receiving layer. The overcoat layer contains at least one metal oxide particle selected from cerium oxide, titanium oxide, zinc oxide and yttrium oxide.

USE - Used for a thermal printer, or a **laser** printer and finds its application in thermal sensitive transfer recording.

ADVANTAGE - The overcoat layer has very high resistance against a deterioration due to UV rays, high hardness, and compactness. The use of the overcoat layer penetrates no deposits, including a **sebaceous** matter, perspiration, a plasticiser, various solvents into the image receiving layer. The resulting image receiving sheet has dramatically enhanced picture image preservation.

Dwg.0/0

Title Terms: IMAGE; RECEIVE; SHEET; THERMAL; SENSITIVE; TRANSFER; RECORD; IMAGE; RECEIVE; LAYER; ACCEPT; THERMAL; MIGRATION; **DYE** ; HOT; TRANSFER; MEDIUM; BASE; MATERIAL; HIGH; RESISTANCE; ULTRAVIOLET; RAY
Derwent Class: A89; G05; L03; P75; T04
International Patent Class (Main): B41M-005/38
File Segment: CPI; EPI; EngPI

6/5/8 (Item 8 from file: 350)

010519460
WPI Acc No: 1996-016411/199602
XRAM Acc No: C96-005242
XRPX Acc No: N96-014199

Heat-sensitive hot transfer recording for recorded picture image - comprises colouring material layer contg. hot-migrating dye **on base film with** laser **heat-treated sheet of resin, for plasticiser resistance**

Patent Assignee: MITSUBISHI PAPER MILLS LTD (MITY)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7290846	A	19951107	JP 9489436	A	19940427	199602	B

Priority Applications (No Type Date): JP 9489436 A 19940427

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7290846	A		9	B41M-005/38	

Abstract (Basic): JP 7290846 A

A transfer sheet has a colouring material layer contg. a hot migrating **dye** on a base film.

An image receiving sheet has image receiving layer having a dyeing property on a base film.

The transfer sheet is faced and superimposed on image receiving sheet.

The transfer sheet is heated from its non-colouring material layer with thermal head or **laser** to transfer the **dye** in the colouring material layer to the image receiving layer for picture image recording.

A heat-treated sheet comprising non-dyeing resin contg. no hot migrating **dye** is pressed on the surface of the picture image-recorded image receiving sheet.

Heat treatment is applied to the image receiving sheet from the rear of the heat-treated sheet with a thermal head or **laser** at heat energy of 50-300 mJ/mm2.

USE - The hot transfer recording is applied to a recorded picture image.

ADVANTAGE - Heat treatment to the image receiving sheet diffuses and penetrates the hot migrating **dye** around the surface of image receiving layer into the image receiving layer.

This provides the image receiving layer with no adverse effect, including a **sebaceous** matter, perspiration or a plasticiser. The resulting transfer picture image has enhanced discolouration (due to finger touch) resistance and plasticiser resistance.

Dwg.0/0

Title Terms: HEAT; SENSITIVE; HOT; TRANSFER; RECORD; RECORD; PICTURE; IMAGE ; COMPRISE; COLOUR; MATERIAL; LAYER; CONTAIN; HOT; MIGRATION; **DYE** ; BASE ; FILM; **LASER** ; HEAT; TREAT; SHEET; RESIN; PLASTICISED; RESISTANCE

Derwent Class: A89; G05; P75; T04

International Patent Class (Main): B41M-005/38

International Patent Class (Additional): B41M-005/26

File Segment: CPI; EPI; EngPI

6/TI/1 (Item 1 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Cosmetic or dermatological compositions containing clover extract, effective against environmentally induced inflammatory, hyperactive and/or degenerative skin disorders, e.g. loss of elasticity, pruritis or eczema

6/TI/3 (Item 3 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Cosmetic composition useful for the treatment of skin damage such as acne vulgaris comprises basic milk factors or its variants

6/TI/4 (Item 4 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Lotion for use as topical transdermal skin care composition for alleviating skin infirmities, comprises preset amount of organic safflower oil , **cold-pressed flaxseed** oil **and tincture of benzoin, as main constituents**

6/TI/9 (Item 9 from file: 350)
DIALOG(R)File 350:(c) 2003 Thomson Derwent. All rts. reserv.

Detergent compsn for precision optical device - comprises polyoxyethylene sec alkyl ether, sodium silicate and water

6/TI/10 (Item 10 from file: 347)
DIALOG(R)File 347:(c) 2003 JPO & JAPIO. All rts. reserv.

DETERGENT PARTICLE AND PARTICULATE DETERGENT COMPOSITION

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Set     Items   Description
S1     736534   CHROMOPHOR? OR OIL OR OILS OR SUFACTANT? ? OR LIPOSOME? ? -
             OR DYE? ?
S2       2075   SEBACEOUS OR SEBUM
S3     557721   LASER? ?
S4         10   S1 AND S2 AND S3
S5         10   IDPAT (sorted in duplicate/non-duplicate order)
S6         10   IDPAT (primary/non-duplicate records only)
S7          2   S6 AND IC=A61N
? show files
File 347:JAPIO Oct 1976-2002/Dec(Updated 030402)
         (c) 2003 JPO & JAPIO
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200325
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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